In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works," this document permits the pump installation for Kiluaea-Earthart Well (Well No. 1325-03) at 2970 Kalihiwai Road, Kauai, TMK 5-2-10:28 Lot 11-B-3, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 80 gpm capacity, or less, pump in the well.

3. The permittee shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on an annual basis, on forms provided by the Chairperson (attached).

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

5. The permittee shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.

6. The permittee shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

7. The pump installation permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

8. The permit may be revoked if work is not started within sixty (60) days after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

10. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: November 19, 1998
Expiration Date: November 19, 2000

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I do not hold a valid permit until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: ___________________________ Date: ________________

Printed Name: ___________________________ Firm or Title: ___________________________

Installer's Signature: ___________________________ License #: AC-16437 Date: ________________

Printed Name: ___________________________ Firm or Title: ___________________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments

- USGS Department of Health Safe Drinking Water & Wastewater Branches
- Kauai Department of Water Supply
- Sharman Noguchi, Hawaiian Trust Co., Ltd.
PART II.  (PERMANENT) PUMP INSTALLATION REPORT

20. Pump Installation Company: ROSCOE MOSS HAWAII, A DIVISION OF BEYLIK DRILLING, INC.
21. Name of person performing work: CLAYTON IGARASHI
22. Date Pump Installation Completed: MAY 25, 1999

23. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: SUB/GRUNDfos/80S100-8
   - Capacity: 80 gpm
   - Motor type, H.P., Voltage, rpm: SUB/10/230/3450
   - Depth of Pump Intake Setting 182 ft. below GRADE, which elevation is 134.22 ft.
   - Depth to bottom of airline 182 ft. below GRADE, which elevation is 134.22 ft.
   - Pumping Head is 297 ft. Type of flow meter: which measures in

24. As-built drawings attached? X Yes _ No
25. Other remarks/comments: (See below)

Pump Installation Contractor (print) BEYLIK DRILLING, INC. C-57 Lic. No. C-28196 2/89
Signature WILLIAM C. MOORE, VICE PRES. Date MAY 11, 2000
Applicant (print) Anne G. Carmalt
Signature Anne G. Carmalt Date Dec 6, 2000

8.(cont'd) DRILLER'S LOG (cont'd):

<table>
<thead>
<tr>
<th>Water Level Dates</th>
<th>Depth (ft)</th>
<th>Rock Description, Remarks</th>
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</table>

19. Remarks: WEL 7-1929-03 KILAUEA KAHAKALI
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources

WELL COMPLETION REPORT

Check Appropriate Box  
☐ Well Construction  
☐ (Permanent) Pump Installation

Instructions: Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 121, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance, call the Commission Regulation Branch at 587-0725, or 1-800-484-4844 Extension 70225.

1. State Well No.: 1325-03  
   Well Name: Kilauea-Pahara  
   Island: Kauai

2. Location/Address: 2970 Kalalua Road  
   Tax Map Key: 6-5-2-10: 28 7.0X 11B-3

PART I.  
WELL CONSTRUCTION REPORT

3. Drilling Company: ___________________________
4. Name of driller who performed work:  
   ___________________________
5. Type of rig/construction:  
   ___________________________
6. Date(s) Well Construction and pump tests (if any) completed:  
   ___________________________
7. GROUND ELEVATION (referenced to mean sea level, msl): ___________________________ ft.  
   Bench Mark (description/location): ___________________________  
   Elevation (msl): ___________________________ ft.
8. DRILLER'S LOG: Please attach geologic log (if available or if required by permit)  
   Depths (ft.) Rock Description, Water Level, Dates, etc.  
   Depths (ft.) Rock Description, Water Level, Dates, etc.
   ___________________________ to ___________________________
   ___________________________ to ___________________________
   ___________________________ to ___________________________
   ___________________________ to ___________________________
   (If more space is needed, continue on back)
9. Total depth of well below ground: ___________________________ ft.
10. Hole size: ___________________________________________  
    inch dia. from ___________________________ ft. to ___________________________ ft. below ground  
    inch dia. from ___________________________ ft. to ___________________________ ft. below ground  
    inch dia. from ___________________________ ft. to ___________________________ ft. below ground
11. Casing installed: ___________________________________________  
    in. I.D. x ___________________________ in. wall solid section to ___________________________ ft. below ground  
    in. I.D. x ___________________________ in. wall perforated section to ___________________________ ft. below ground
    Casing Material/Slot Size: ___________________________
12. Annulus:  
    Grouted from ___________________________ ft. below ground to ___________________________ ft. below ground  
    Gravel packed from ___________________________ ft. below ground to ___________________________ ft. below ground
13. Initial water level: ___________________________ ft. below ground.  
    Date and time of measurement: ___________________________
14. Initial chloride: ___________________________ ppm  
    Date and time of sampling: ___________________________
15. Initial temperature: ___________________________ °F  
    Date and time of measurement: ___________________________
16. PUMPING TESTS: Reference Point (R.P.) used: ___________________________ which elevation is ___________________________ ft.
    (1) Step-Drawdown Test Date ___________________________  
        Start water level ___________________________ ft. below R.P.  
        End water level ___________________________ ft. below R.P.
    (2) Long-term Aquifer Test Date ___________________________  
        Start water level ___________________________ ft. below R.P.  
        End water level ___________________________ ft. below R.P.
17. Aquifer Pump Test Procedures data & graphs (1995 LTAT Form) attached? __ Yes ____ No
18. As-built drawings attached attached? __ Yes ____ No
19. Other remarks/comments: ___________________________
   (On back of this form)

Well Drilling Contractor (print) ___________________________  
C-57 Lic. No. ___________________________

Signature ___________________________  
Date ___________________________

Surveyor (print) ___________________________  
Lic. No. ___________________________

Signature ___________________________  
Date ___________________________

Applicant (print) ___________________________  
Date ___________________________
Dear Mr. Imala,

Enclosed please find the signed Well Completion Report. Sorry for the delay in getting it submitted.

Please call if you have any questions.

Regards,

Ann Wigely
949-494-8718
Mr. William C. Moore  
Roscoe Moss Hawaii Inc.  
91-259A Olai Street  
Kapolei, HI 96707

Dear Mr. Moore:

Well Completion Report for Well No. 1325-03

We have received your Well Completion Report Part II for the Kilauea-Earhart Well (Well No. 1325-03) and acknowledge that it is complete. Thank you for your attention to this matter.

Sincerely,

[Signature]

LINNEL T. NISHIOKA  
Deputy Director

LN:ss
### WCR 2 Check for Well No. 1325-03

**1. Pump Tests Check (special condition of PIP? Yes/No)**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
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<tbody>
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</table>

- Glenn Bauer (initial if yes)

#### Step-Drawdown Test:
- acceptable
- followed WCPI Stds
- analysis attached
- proposed pump cap o.k.

#### Aquifer Pump Test:
- acceptable
- followed WCPI Stds
- T & S analysis attached

#### Well Interference:
- estimated Steady-State
drawdown at 1-mile radius is ______ ft.
- analysis attached

#### Stream Surface Water Impacted:
- If yes, identify most probable stream

---

**2. Pump Installation Check**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If no, describe deficiency</th>
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</table>

- Mitch Ohye (initial)

- data complete
- followed WCPI Stds
- wellphys.dbf updated
- wellaplic.dbf updated

---

3. Lena

4. Roy

5. Tullia

6. Linnell

7. Lena - file

---

*Note: Missing applicant's signature*

**Applicant/permittee is Roscoe Moss, who is also pump installer.**
## PART II. (PERMANENT) PUMP INSTALLATION REPORT

20. Pump Installation Company: **ROSCOE MOSS HAWAII, A DIVISION OF BEYLIK DRILLING, INC.**

21. Name of person performing work: **CLAYTON IGARASHI**

22. Date Pump Installation Completed: **MAY 25, 1999**

23. **PUMP INSTALLATION:**
   - Pump Type, Make, Serial No.: **SUB/GRUNDFOS/80S100-8**
   - Capacity: **80 gpm**
   - Motor type, H.P., Voltage, rpm: **SUB/10/230/3450**
   - Depth of Pump Intake Setting: **182 ft. below GRADE**, which elevation is **134.22 ft.**
   - Depth to bottom of airline: **182 ft. below GRADE**, which elevation is **134.22 ft.**
   - Pumping Head: **297 ft.**
   - Type of flow meter: **which measures in**

24. As-built drawings attached: **Yes X No**

25. Other remarks/comments: **(See below)**

---

### Pump Installation Contractor (print)
**BEYLIK DRILLING, INC. C-57 Lic. No. C-28796 21896**

**Signature**

**WILLIAM C. MOORE**, **VICE PRES.**

**Date**

**MAY 11, 2000**

<table>
<thead>
<tr>
<th>Applicant (print)</th>
<th><strong>WILLIAM C. MOORE, VICE PRES.</strong></th>
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<tr>
<td>Signature</td>
<td><strong>WILLIAM C. MOORE, VICE PRES.</strong></td>
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<tr>
<td>Date</td>
<td><strong>MAY 11, 2000</strong></td>
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8.(cont'd) **DRILLER'S LOG (cont'd):**

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# State of Hawaii

## COMMISSION ON WATER RESOURCE MANAGEMENT

Department of Land and Natural Resources

### WELL COMPLETION REPORT

<table>
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<tr>
<th>Instruction: Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-0225, or 1-800-468-4644 Extension 70225.</th>
</tr>
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### PART I. WELL CONSTRUCTION REPORT

<table>
<thead>
<tr>
<th>3. Drilling Company:</th>
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<tr>
<td>4. Name of driller who performed work:</td>
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<td>5. Type of rig/construction:</td>
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<td>6. Date(s) Well Construction and pump tests (if any) completed:</td>
</tr>
<tr>
<td>8. DRILLER’S LOG: Please attach geologic log (if available or if required by permit) Days (ft.) Rock Description, Water Level, Dates, etc. Depths (ft.) Rock Description, Water Level, Dates, etc.</td>
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<tr>
<td>9. Total depth of well below ground: ______ ft.</td>
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<td>10. Hole size: ______ inch dia. from ______ ft. to ______ ft. below ground</td>
</tr>
<tr>
<td>11. Casing installed: ______ in. I.D. x ______ in. wall solid section to ______ ft. below ground</td>
</tr>
<tr>
<td>12. Annulus: Grouted from ______ ft. below ground to ______ ft. below ground Gravel packed from ______ ft. below ground to ______ ft. below ground</td>
</tr>
<tr>
<td>13. Initial water level: ______ ft. below ground. Date and time of measurement:</td>
</tr>
<tr>
<td>14. Initial chloride: ______ ppm Date and time of sampling:</td>
</tr>
<tr>
<td>15. Initial temperature: ______ °F Date and time of measurement:</td>
</tr>
<tr>
<td>16. PUMPING TESTS: Reference Point (R.P.) used: ______, which elevation is ______ ft. (1) Step-Drawdown Test Date ______ (2) Long-term Aquifer Test Date ______ Start water level ______ ft. below R.P. Start water level ______ ft. below R.P. End water level ______ ft. below R.P. End water level ______ ft. below R.P.</td>
</tr>
<tr>
<td>17. Aquifer Pump Test Procedures data &amp; graphs (1/9/96 LTAT Form) attached? ______ Yes ______ No</td>
</tr>
<tr>
<td>18. As-built drawings attached? ______ Yes ______ No</td>
</tr>
<tr>
<td>19. Other remarks/comments: (On back of this form)</td>
</tr>
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</table>

### Well Drilling Contractor (print) C-57 Lic. No. |

Signature Date |

Surveyor (print) Lic. No. |

Signature Date |

Applicant (print) |

Signature Date
Kilauea Earhart Well 93-25-03 10/23/92

Ele. + 134.22' (MSL)
Ele. + 132.91' (MSL)

14" borehole

8" Blank Casing
Static W.L. 12.25' (-14.97 msl)
W.L. 105 gpm
169.90' (-35.64 msl)
175' (-42.09 msl)

295' (-162.09 msl)
Mr. Tracy Runnells  
Roscoe Moss Hawaii Inc.  
91-259A Olai Street  
Kapolei, HI 96707-1719  

Dear Mr. Runnells:  

Well Abandonment Report for Well No. 1325-02  

We have received your Well Abandonment Report for the Kilauea-Earhart Well (Well No. 1325-02) and acknowledge that it is complete.  

If you have any questions, please contact Lenore Nakama of the Commission staff at 587-0218.  

Sincerely,  

EDWIN T. SAKODA  
Acting Deputy Director  

LN:ss
WE ARE SENDING YOU  X  Attached  □ Under separate cover via ______________ the following items:

□ Shop drawings  □ Prints  □ Plans  □ Samples  □ Specifications
□ Copy of letter  □ Change order  □

<table>
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<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>12-24-98</td>
<td>1</td>
<td>WELL ABANDNMENT REPORT</td>
</tr>
<tr>
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<td></td>
<td>SIGNED PERMIT TO ABANDON EARHART WELL 132502</td>
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</tbody>
</table>

THESE ARE TRANSMITTED as checked below:

□ For approval  □ Approved as submitted  □ Resubmit ______ copies for approval
□ For your use  □ Approved as noted  □ Submit ______ copies for distribution
□ As requested  □ Returned for corrections  □ Return ______ corrected prints
□ For review and comment  □
□ FOR BIDS DUE ________________________ 19  □ PRINTS RETURNED AFTER LOAN TO US

REMARKS

________________________________________

COPY TO ________________________________

SIGNED:  TRACY RUNNELLS

If enclosures are not as noted, kindly notify us at once.
WELLS CONSTRUCTION PERMIT TO ABANDON/SEAL
Kilauea-Earhart Well, Well No. 1325-02

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the abandonment/sealing of Kilauea-Earhart Well (Well No. 1325-02) at 2970 Kalihiwai Road, Kauai, TMK S-2-10-28, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809, shall be notified in writing before any work covered by this permit commences.
2. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified.
3. The owner or operator of any well which has been determined by the department or voluntarily declared by the owner or operator to be abandoned as defined in §13-168-2, after written notification, shall be required, at owner's or operator's expense, to re-case, cement, plug back, cap, or otherwise repair the well or fill and seal the well with cement in a manner approved by the commission.
4. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.
5. The Well Abandonment Report form (attached) shall be submitted to the Commission on Water Resource Management within sixty (60) days after completion of the work.
6. The permittee shall comply with all applicable laws, rules, and ordinances.
7. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: December 9, 1998
Expiration Date: When well is sealed in a manner acceptable to the Commission

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: 
Printed Name: Anne G. Earhart 
Firm or Title: OWNER

Contractor's Signature: Tracy Runnels
License #: AC-18437 Date: 12/13/98
Printed Name: Tracy Runnels
Firm or Title: Roscoe Moss Hawaii, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment:

C:
USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Kauai Department of Water Supply
Sherman Noguchi, Pacific Century Trust
Anne Earhart
STATE WELL NO. 1325-02
WELL NAME Kilauea-earhart
ISLAND Kauai

LOCATION: Address 2970 Kalihiwai Rd. Kilauea, HI 96754
Tax Map Key 4-5-2-10-28

DRILLING OR PUMP INSTALLATION CONTRACTOR Roscoe Moss Hawaii Inc.
Lot 11-B-3

CONTRACTOR'S C-57 LICENSE NUMBER AC-16437

NAME OF DRILLER WHO PERFORMED WORK Rodney Couch

TYPE OF RIG/CONSTRUCTION Crane Truck

DATE OF WELL SEALING COMPLETION 12-21-98

(NOTE: Report must be submitted within 30 days after this date)

Finished Grade Elevation 97.1 ft.

Casing Diameter NA in.

Check Material Used
Grout Seal: [ ] Cement [ ] Sand/Cement
Sand/Cement Ratio 1:1

Total Measured Depth 189 ft.

Measured Depth Blank Casing NA ft.

Measured Depth Perforated Casing NA ft.

Measured Depth to Bottom of Grout 189 ft.

Measured Depth of Sand Fill NA ft.

Remarks: All well casings were removed. Well was grouted via tremie 0'-189'

(If more space is needed, continue on back)

Contractor (print) Roscoe Moss Hawaii Inc.
Signature

Title Drilling Activities

Date 12-24-98

For Official Use:

For Driller's Use:

ID-98667021B PAGE 1/2

STATE OF HAWAII
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

WELL ABANDONMENT REPORT

Instructions: Please print or type and submit completed report within 30 days after sealing completion to the Commission on Water Resource Management, P.O. Box 1281, Honolulu, Hawaii 96809. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 587-2205.

1. STATE WELL NO. 1325-02
2. LOCATION: Address 2970 Kalihiwai Rd. Kilauea, HI 96754
3. DRILLING OR PUMP INSTALLATION CONTRACTOR Roscoe Moss Hawaii Inc.
4. CONTRACTOR'S C-57 LICENSE NUMBER AC-16437
5. NAME OF DRILLER WHO PERFORMED WORK Rodney Couch
6. TYPE OF RIG/CONSTRUCTION Crane Truck
7. DATE OF WELL SEALING COMPLETION 12-21-98

(NOTE: Report must be submitted within 30 days after this date)

Finished Grade Elevation 97.1 ft.

Casing Diameter NA in.

Check Material Used
Grout Seal: [ ] Cement [ ] Sand/Cement
Sand/Cement Ratio 1:1

Total Measured Depth 189 ft.

Measured Depth Blank Casing NA ft.

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Measured Depth of Sand Fill NA ft.

Remarks: All well casings were removed. Well was grouted via tremie 0'-189'

(If more space is needed, continue on back)

Contractor (print) Roscoe Moss Hawaii Inc.
Signature

Title Drilling Activities

Date 12-24-98

For Official Use:

For Driller's Use:

Job Name Job No.
FACSIMILE TRANSMITTAL

DATE 12/24/98
TO: State Water Commission
FROM: Tracy Runnels
REF: Anne G. Earhart

Mailing Address: 105 Crescent Bay Drive Suite M
Los Angeles, CA 92651

Well Address: 2970 Kaliihiwai Road
Kilauea, HI 96754

Merry Christmas!

Tracy
Mr. Tracy Runnels
Roscoe Moss Hawaii Inc.
91-259A Olai Street
Kapolei, Hawaii 96707

Dear Mr. Runnels:

Well Construction Permit to Abandon/Seal
Kilauea-Earhart (Well No. 1325-02)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well abandonment/sealing activities. As part of the Chairperson’s approval, the following special condition was added and is part of your permit under Permit Condition 12:

Special Conditions

1. Attached for your information is a copy of the Department of Health’s review comments.

To validate your permit, please sign and have the permittee sign both permit originals and return one for our files.

IMPORTANT - The permittee is responsible for all conditions of the permit. This includes ensuring that the your licensed contractor, submits a completed Well Abandonment Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

If you have any questions, please call the Commission staff at 587-0218.

Aloha,

Michael D. Wilson
Chairperson

Enclosures
WELL CONSTRUCTION PERMIT TO ABANDON/SEAL

Kilauea-Earhart Well, Well No. 1325-02

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the abandonment/sealing of Kilauea-Earhart Well (Well No. 1325-02) at 2970 Kalihiwal Road, Kauai, TMK 5-2-10:28, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809, shall be notified in writing before any work covered by this permit commences.

2. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified.

3. The owner or operator of any well which has been determined by the department or voluntarily declared by the owner or operator to be abandoned as defined in §13-168-2, after written notification, shall be required, at owner's or operator's expense, to re-case, cement, plug back, cap, or otherwise repair the well or fill and seal the well with cement in a manner approved by the commission.

4. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

5. The Well Abandonment Report form (attached) shall be submitted to the Commission on Water Resource Management within sixty (60) days after completion of the work.

6. The permittee shall comply with all applicable laws, rules, and ordinances.

7. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: December 9, 1998
Expiration Date: When well is sealed in a manner acceptable to the Commission

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: ___________________________ Date: __________
Printed Name: ___________________________ Firm or Title: ___________________________

Contractor's Signature: ___________________________ License #: __________ Date: __________
Printed Name: ___________________________ Firm or Title: ___________________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment

USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Kauai Department of Water Supply
Shannan Noguchi, Pacific Century Trust
Anne Earhart
TO: Honorable Lawrence Miike, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application to Abandon/Seal
Kilauea-Earhart (Well No. 1325-02)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: Lori N. Kajiwara
Phone: 586-4294

Signed: Lori N. Kajiwara
Date: 11-30-98
November 30, 1998

To: Lenore Nakama, Commission on Water Resource Management

From: Lori Kajiwara, Planning & Design Section, Wastewater Branch

Subject: Well Construction Permit Application to Abandon/Seal Kilauea - Earhart (Well No. 1325-02)
TMK: (4) 5-2-10: 28

Regarding the above mentioned subject, the following is a source possible wastewater contamination located near the proposed well site.

DOH-Wastewater Branch Individual Wastewater System (IWS) File # 3109
for address: **2960 G Kalihiwai Road, Kilauea**

Submit Date: **November 21, 1995**
Plan Approval Date: **November 30, 1995**
Inspection Date: **August 29, 1997**
System Approved Date: **December 9, 1997**
DOH Engineer: Felix Udasco

For: **Septic Tank with disposal system - Trench serving 5 bedroom dwelling**

For more information - please contact Felix Udasco (the original reviewing engineer) of the Wastewater Branch on Oahu at telephone 586-4294 or Joe Tateyama of the Wastewater Branch at the Kauai District Health Office at telephone 241-3323.

(This memo was also sent with the Kilauea - Earhart Well No. 1325-03 Well Construction Permit Application dated September 24, 1998.)
TO: Honorable Lawrence Miike, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application to Abandon/Seal
Kilauea-Earhart (Well No. 1325-02)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

LN:ss
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-20.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ] is [ ] is not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: William Wong Phone: 586-4258

Signed: William Wong Date: 12/01/98
Mr. Tracy Runnells
Roscoe Moss Hawaii Inc.
91-259A Olai Street
Kapolei, Hawaii 96707

Dear Mr. Runnells:

Pump Installation Permit
Kilauea-Earhart (Well No. 1325-03)

Enclosed are two (2) originals of your approved Pump Installation Permit for the captioned well(s) which authorizes permanent pump installation work for the well(s). As part of the Chairperson’s approval, the following special conditions were added and are part of your permit under Permit Condition 10:

**Special Conditions**

1. (NONE)

The permittee is responsible for all conditions of the permit. This includes ensuring that the pump installation contractor, or other party who installs the pump, submits a completed Part II of the Well Completion Report form (enclosed) within sixty (60) days after the pump installation work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

To validate your pump installation permit, please sign and have the permittee sign both permit originals and return one for our files.

A copy of the Well Completion Report (Part II) and a copy of your water use report form are enclosed for your use. Except for the annual water use report form, please provide copies of all the information in this packet to your pump installation contractor.

Finally, this letter is notice that we have accepted your Well Completion Report - Part I as complete.

If you have any questions, please call the Commission staff at 587-0218.

Aloha,

Chairperson

Enclosures
PUMP INSTALLATION PERMIT

Kilauea-Earhart Well, Well No. 1325-03

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the pump installation for Kilauea-Earhart Well (Well No. 1325-03) at 2970 Kalihwai Road, Kauai, TMK 5-2-10:28 Lot 11-B-3, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson to the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work covered by this permit commences and staff shall be allowed to inspect installation activities in accordance with §13-168-15, Hawaii Administrative Rules.

2. The pump installation permit shall be for installation of a 80 gpm capacity, or less, pump in the well.

3. The permittee shall provide and maintain an approved meter or other appropriate means for measuring and reporting withdrawals and water levels, and appropriate devices or means for measuring chlorides and temperature. These data shall be measured monthly and reported to the Commission on an annual basis, on forms provided by the Chairperson (attached).

4. The proposed use shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to pump water from a well shall not constitute a determination of correlative water rights. The permittee is notified and by this provision understands that the quantity of water taken from the well could be reduced by the Commission in the future. This permit is not a commitment that the pump capacity permitted here or even some lesser amount is guaranteed in the future.

5. The permittee shall complete and submit as-built drawings and Part II - (Permanent) Pump Installation Report of the Well Completion Report (attached) to the Chairperson within sixty (60) days after completion of work.

6. The permittee shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

7. The pump installation permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

8. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the pump installation permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

9. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

10. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: November 19, 1998
Expiration Date: November 19, 2000

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I do not hold a valid permit until I and the pump installer have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee’s Signature: ___________________________ Date: ____________

Printed Name: ___________________________ Firm or Title: ___________________________

Installer’s Signature: ___________________________ License #: ________ Date: ____________

Printed Name: ___________________________ Firm or Title: ___________________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachments:

C: USGS
Department of Health/ Safe Drinking Water & Wastewater Branches
Kauai Department of Water Supply
Sharman Noguchi, Hawaiian Trust Co., Ltd.
Mr. Tracy Runnells  
Roscoe Moss Hawaii Inc.  
91-259A Olai Street  
Kapolei, HI 96707

Dear Mr. Runnells:

Well Construction Permit Application to Abandon/Seal Well No. 1325-02

We acknowledge receipt, on November 9, 1998, of your completed well construction permit application to abandon/seal the Kilauea-Earhart Well (Well No. 1325-02). You can expect your application to be processed within ninety (90) days from this date.

If you have any questions about your permit application, please contact Lenore Nakama of the Commission staff at 587-0218.

Sincerely,

TIMOTHY E. JOHNS  
Deputy Director

LN:ss
Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by December 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ] is [ ] is not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

APPLICATION FOR PERMIT
☐ Well Construction or ☐ Pump Installation

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225.

1. APPLICANT: (circle primary contact a, b, or c)

(a) WELL OWNER

Name: Anne Earhart
Address: 2970 Kaliliwai Road
City: Kilauea
State: HI
Zip: 96754

(b) LANDOWNER

Name: Hawaii Trust Co Ltd
Address: 111 S King Street
City: Honolulu
State: HI
Zip: 96813

(c) CONTRACTOR

Name: Roscoe Moss Hawaii Inc
Address: 01-259A Olai Street
City: Kapolei
State: HI
Zip: 96707

2. WELL LOCATION/NAME: Kilauea-Earhart Well
Address: 2970 Kaliliwai Road

(Associate a USGS map, scale 1"=2000", and a property tax map showing well location referenced to established property boundaries.)

3. (a) PROPOSED WORK:

☐ Drill New Well
☐ Deepen
☐ Install New Pump
☐ Modify Existing Well
☐ Redrill
☐ Modify Pump
☐ Abandon

* Be sure to complete and submit well abandonment report upon completion of work.

(b) WELL TYPE:

☐ Dug
☐ Drilled
☐ Radial
☐ Is this well a part of a battery of wells? ☐ Yes ☐ No

(G briefly describe and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION

Rated Pump Capacity: NA gallons per minute

Pump Type:
☐ Deep Well Turbine
☐ Rotary
☐ Submersible
☐ Propeller
☐ Rotary-Displacement
☐ Reciprocating
☐ Gas
☐ Centrifugal
☐ Rotary-Gear
☐ Impulse
☐ Electric, rated horsepower

If Pump Replacement, Existing Pump Capacity: 

5. PROPOSED USE:

☐ Municipal (including hotels, stores, etc.)
☐ Domestic (individual, noncommercial water users)
☐ Irrigation (crop)
☐ Military
☐ Industrial
☐ Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: NA gallons per day

(b) METHOD OF FLOW MEASUREMENT:

☐ Flow-meter
☐ Open-pipe
☐ Office Plate
☐ Weir

7. PENDING ACTIONS:

☐ CDUA
☐ SMA
☐ EIS
☐ EA
☐ NONE
☐ Other (explain)

Completion Date: ____________

8. REMARKS, EXPLANATIONS: This well was drilled to 203 feet, cemented back to 189 feet due to high chlorides. Poor yield and a better test bore nearby opted the permitting and completion of the test bore. 8" casing was removed from this well and installed

(If more space is needed, continue on back)

Well Owner: Anne Earhart
Signature: ____________________________
Date: ____________

Landowner: ____________________________
Signature: ____________________________
Date: ____________

Contractor: Roscoe Moss Hawaii Inc
Signature: ____________________________
Date: ____________

For Official Use Only:
Date Received: ____________
Date Approved: ____________
Field Checked By: ____________________________
Date: ____________

Longitude: ____________
State Well No: ____________

Aquifer System Name: ____________
State: HI
8. Remarks, Explanations (cont'd): in test bore. We wish to now abandon this well as an open bore hole and will remove 16" diameter conductor also on completion of cementing. We would suggest future well projects like this be streamlined in some way. The test bore should be well # 1325-02A and this be an abandoned test bore having never been a completed cased well.

The applications, approvals and signatures of Surveyor, Landowner, Well owner and DOH comments etc have made this a paper chase traveled 1000's of miles. I would suggest a simplified abandonment application be drafted also, one that resembles the abandonment report. There is no place to put Well #1325-02 on this application is one good reason. Thanks for your help, Lenore...Tracy

PROPOSED ABANDONMENT DETAIL

Elevation at top of casing _____ n. msl.

Ground Elevation 97.1 n. msl

Cement Grout 189' n.

Rock Packing _____ n.

Hole Diameter 14 in.

Total Depth 189' n.

Solid Casing: NA

Material

Length ________________ n.

Diameter ________________ in.

Wall thickness ________________ in.

Casing: ☐ Perforated ☐ Screen NA

Material

Length ________________ n.

Diameter ________________ in.

Wall thickness ________________ in.

Openings ________________ sq. in./ft.

Open Hole:

Length ________________ n.

Diameter ________________ in.

We propose abandonment via 1:1 cement/sand grout.
We will tremel grout filling the total 189'.

Closed Hole: 1325-02A

Tracy

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/Well abandonment reports.
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

APPLICATION FOR PERMIT
☐ Well Construction or ☐ Pump Installation

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $225.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-2225.

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax 682-5866
   (a) WELL OWNER: Anne Earhart
   Firm Name: Pacific Century Trust as Trustee
   Contact Person: Sherman Nagoshi
   Address: 990 Kapiolani Blvd. Suite 1810
            Honolulu, HI 96813
   (b) LANDOWNER: Pacific Century Trust as Trustee
   Firm Name: Pacific Century Trust as Trustee
   Contact Person: Sherman Nagoshi
   Address: 990 Kapiolani Blvd. Suite 1810
            Honolulu, HI 96813
   (c) CONTRACTOR: Roscoe Moss Hawaii Inc.
   Firm Name: Roscoe Moss Hawaii Inc.
   Contact Person: Tracy Runnels
   Address: 31-295A Olai Street
            Kapolei, HI 96707

2. WELL LOCATION/NAME: Kilauea-Earhart Well
   Island: Kauai
   Address: 2970 Kaliihiwai Road
   Tax Map Key: L-5-2-10:28
   (Attach a USGS map, scale 1"=2000", and a property tax map showing well location reference to established property boundaries.)

3. (a) PROPOSED WORK: □ Drill New Well □ Deepen
   □ Modify Existing Well □ Radial
   □ Abandon/Seal □ Replace Pump
   * Be sure to complete and submit well abandonment report upon completion of work.
   (b) WELL TYPE: □ Dug □ Bored □ Driven □ Drilled
   □ Radial
   Is this well part of a battery of wells? □ Yes □ No
   (Briefly describe and fill in the diagram on the back of this form)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: NA gallons per minute
   □ Deep Well Turbine □ Rotary
   □ Submersible □ Rotary-Displacement
   □ Centrifugal □ Rotary-Gear □ Impulse
   If Pump Replacement, Existing Pump Capacity:
   gallons per minute

5. PROPOSED USE: NA
   □ Municipal (including hotels, stores, etc.) □ Industrial
   □ Domestic (individual, noncommercial water uses) □ Other (explain)
   □ Irrigation (crop) □ Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: NA gallons per day
   (b) METHOD OF FLOW MEASUREMENT: □ Flowmeter □ Open-Prime
   □ Office Pipe □ Well

7. PENDING ACTIONS: □ CDA □ SCA □ EIS □ EA
   □ NONE □ Other (explain)
   Completion Date:

8. REMARKS, EXPLANATIONS: This well was drilled to 203', cemented back to 189' due to high chlorides. Poor yield and a better test bore nearby opted the permitting and completion of the test bore. 8" casing was removed from this well and installed (more than a needed, continue at base)

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of approval date; 2) the contractor shall submit to the Commission a well completion and abandonment report within 30 days after the completion date of the permit work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of conclusive water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Well Owner: Pacific Century Trust as Trustee
Signature: ____________________________________________
Date: ____________________

Landowner: Pacific Century Trust as Trustee
Signature: ____________________________________________
Date: ____________________

Aquifer System Name: Hawaii Aquifer System
State Well No: 1100069

For Official Use Only:
Date Resolved
Date Accepted
Field Checked By
Date
APPLICATION FOR PERMIT

Well Construction or ☐ Pump Installation

1. APPLICANT: (circle primary contact a, b, or c) Primary Fax: 682-5866
   (a) WELL OWNER
   Family Name: Earhart
   Contact Person: Sam
   Address: 2970 Kalihwa Road
   Kapolei, HI 96707

   (b) LANDOWNER
   Family Name: Moss
   Contact Person: Tracy Runnels
   Address: 91-259A 01a Street
   Kapolei, HI 96707

   (c) CONTRACTOR
   Family Name: Moss
   Contact Person: Tracy Runnels
   Fax: 682-5856
   Address: 91-259A 01a Street
   Kapolei, HI 96707

2. WELL LOCATION NAME: Kilauea-Earhart Well
   Island: Kauai
   Address: 2970 Kalihwa Road
   Tax Map Key: K-5-2-10:28

3. (a) PROPOSED WORK:
   □ Drill New Well
   □ Deepen
   □ Modify Existing Well
   □ Replace Pump
   □ Abandon Gear
   □ Reduct
   □ Install New Pump
   "Be sure to complete and submit well abandonment report upon completion of work"

   (b) WELL TYPE:
   □ Dug
   □ Boarded
   □ Driven
   □ Drilled
   □ Ration
   □ No
   "Is this well part of a system of wells?" Yes / No
   (Briefly describe and fill in the diagram on the back of this form)

4. PROPOSED PUMP INFORMATION:
   Rated Pump Capacity: NA gallons per minute
   Pump Type:
   □ Deep Well Turbine
   □ Rotary
   □ Submersible
   □ Centrifugal
   □ Reciprocating
   □ Impulse
   □ Diesel
   □ Proppel
   □ Gas
   □ Other
   Motor:
   □ Electric, rated horsepower
   □ Water
   □ Steam
   □ Oil
   □ Other
   "If Pump Replacement, Existing Pump Capacity: ________ gallons per minute"

5. PROPOSED USE: NA
   □ Municipal (including hotels, schools, etc.)
   □ Domestic (individual, noncommercial water system)
   □ Irrigation (crop)
   □ Industrial
   □ Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: NA gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
   □ Flowmeter
   □ Open-pipe
   □ Critical Plate
   □ Weir

7. PENDING ACTIONS:
   □ DUA
   □ SMA
   □ ES
   □ EA
   □ NONE
   □ Other (explain)
   Completion Date

8. REMARKS, EXPLANATIONS: This well was drilled to 203' and cemented back to 189' due to high chlorides. Poor yield and a better test bore nearby opted the permitting and completion of the test bore. 8" casing was removed from this well and installed.

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permit work; 3) timely water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of consumptive water rights and shall not constitute the pump capacity or future use up to the permitted pump capacity.

Well Owner: Anne Earhart
Landowner: Tracy Runnels
Contractor: Roscoe Moss Hawaii Inc.

Signature: Anne Earhart
Signature: Tracy Runnels
Signature: Roscoe Moss Hawaii Inc.

Date: 10/29/98
Date: 10/29/98
Date: 10/29/98

For Official Use Only:
Date Received
Date Accepted
Paid Check by
Date
Longitude
Latitude
Aquifer System Name
State Well No.
11CB95 WCPI
WCR 1 Check for Well No. 1325-03 (survey to regulation memo)

1. **Pump Tests Check**  Glenn Bauer (initial)  
   Yes  No  If no, describe deficiency
   - Step-Drawdown Test:  
     - acceptable:  
     - followed WCPI Stds:  
     - analysis attached:  
     - proposed pump cap o.k.:  

   - Aquifer Pump Test:  
     - acceptable:  
     - followed WCPI Stds:  
     - T & S analysis attached:  

   - Well Interference:  
     - estimated Steady-State drawdown at 1-mile radius is 0.0P ft.  
     - analysis attached:  

   - Stream Surface Water Impacted:  
     If yes, identify most probable stream

2. **Construction Check**  Mitch Ohye (initial)  
   Yes  No  If no, describe deficiency
   - data complete:  
   - followed WCPI Stds:  
   - wellphys.dbf updated:  
   - welaplic.dbf updated:  

11/09/98
**THEIS DRAWDOWN CALCULATION**

by Glenn Bauer & Roy Hardy with numerical approximations by Huntton (1980)

**FILE NAME** = Kilauea-Earhart Well No. 1325-02 (Analysis Uses Obs. Well Data 1325-02)

**TEST NAME** = Long-Term Test

**DATE** = October 8, 1998

**INPUT PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Transmissivity</td>
<td>T = 50,050 ft²/day</td>
</tr>
<tr>
<td>Storage Coeff.</td>
<td>S = 0.100 dimensionless</td>
</tr>
<tr>
<td>Time</td>
<td>t = 200,000 days</td>
</tr>
<tr>
<td>Pumping Rate</td>
<td>Q = 1,043.85 ft³/day</td>
</tr>
<tr>
<td>Aquifer thickness</td>
<td>b = 205 ft.</td>
</tr>
<tr>
<td>Hydraulic Conductivity</td>
<td>K = 244.1 ft²/day</td>
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<tr>
<td>Pumping rate</td>
<td>Q = 101 gpm</td>
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<tr>
<td>Radial distance</td>
<td>u = 12 ft.</td>
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**Observation Well**

Radial distance r from pumping well = 1000 ft.

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<tr>
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<th>Drawdown s (ft)</th>
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</table>

Theoretical drawdown a mile (5,280 ft) from the pumping well when u =< 0.01

- T = 50,050 ft²/day
- Sp. yield = 0.1
- t = 365 days
- s = 0.08 ft.
Predicted rise of the saltwater interface given by Bear and Dagan (1968) from Herman Bouwer "Groundwater Hydrology":

\[ Z_t = \frac{pfQ}{2\pi(ps-pf)K_xL} \left(1 - \frac{2pfnL}{2pfhL + (ps - pf)K_xL} \right) \]

Where:
- \( Z_t \) = rise of cone center at time \( t \)
- \( Q \) (ft^3/d) = well discharge
- \( L \) = Depth of mid-pt. below bottom of well before pumping
- \( K_x \) = Horizontal \( K \)
- \( K_z \) = Vertical \( K \)
- \( n \) = porosity of aquifer
- \( ps \) = density of salt water
- \( pf \) = density of freshwater
- \( t \) = time since start of pumping

Predicted rise in transition zone:

<table>
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<th>( t ) (days)</th>
<th>( t ) (years)</th>
<th>( Z_t )</th>
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<tr>
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<tr>
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<tr>
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<td>11.04</td>
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<tr>
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<td>11.69</td>
</tr>
<tr>
<td>500000</td>
<td>1369.86</td>
<td>11.70</td>
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Well Name: Kilauea-Earhart Well 1325-03 (using aquifer parameters derived from obs. well 1325-02)

Kx analysis by: Glenn Bauer

Assume \( K_x/K_z = 200 \)
OBSERVATION WELL
Radial distance r from pumping well 1000 ft.

<table>
<thead>
<tr>
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<th>u</th>
<th>W(u)</th>
<th>ft.</th>
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<td>0.001</td>
<td>0.000</td>
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</table>

Theoretical drawdown a mile (5,280 ft) from the pumping well when \( u < 0.01\)

\[
T = 500050 \text{ ft}^2/\text{day} \\
\text{Sp. yield} = 0.1 \\
t = 365 \text{ days} \\
s = 0.08 \text{ ft.}
\]
Pumping Test No. Constant Rate

Well No. 1325-03
Discharge 101.00 U.S. gal/min

Test conducted on: October 8, 1998

Transmissivity [ft²/d]: 1.73 x 10²
Storativity: 1.75 x 10⁻¹
Pumping Test No. Constant Rate: 1325-03

Test conducted on: October 8, 1998

Well No.: Kilauea-Earhart
Discharge: 101.00 U.S. gal/min
Static water level: 129.25 ft below datum
Distance from the pumping well 0.50 ft

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Pumping Test No. Constant-Rate
Obs. Well 1325-02
Discharge 101.00 U.S.gal/min

Transmissivity [ft²/d]: 5.05 x 10⁴
Hydraulic conductivity [ft/d]: 2.46 x 10²
Aquifer thickness [ft]: 205.00
Pumping Test No. Constant-Rate Test conducted on: October 8, 1998

Obs. Well 1325-02 Kilauea-Earhart

Discharge 101.00 U.S.gal/min Distance from the pumping well 500.00 ft

Static water level: 88.34 ft below datum

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<th>Pumping test duration</th>
<th>Water level</th>
<th>Drawdown</th>
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<td>[ft]</td>
<td>[ft]</td>
<td>[ft]</td>
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Pumping test analysis
Recovery method after
THEIS & JACOB
Unconfined aquifer

Date: 10.11.1998
Page 1

Project: Kilauea-Earhart Well
Evaluated by: Glenn Bauer

Pumping Test No. Recovery Test
Well No. 1325-03
Test conducted on: October 8, 1998
Discharge 101.00 U.S.gal/min

Pumping test duration: 0.34722 d

Transmissivity [ft²/d]: 6.58 x 10²
Hydraulic conductivity [ft/d]: 3.21 x 10⁰
Aquifer thickness [ft]: 205.00
Pumping Test No. Recovery Test

Well No. 1325-03

Discharge 101.00 U.S.gal/min

Static water level: 0.00 ft below datum

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<th>Water level</th>
<th>Residual drawdown</th>
<th>Corrected drawdown</th>
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<td>15</td>
<td>0.02083</td>
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**WELL COMPLETION REPORT**

**PART I. WELL CONSTRUCTION REPORT**

1. **State Well No.:** 1325-03  
   **Well Name:** Kilauea-Earhart  
   **Island:** Kauai

2. **Location/Address:** 2970 Kalilil Road, Kauai

**Drilling Company:** Roscoe Moss Hawaii Inc.

**Name of driller who performed work:** Rodney Couch

**Type of rig/construction:** Cable Tool

**Date(s) Well Construction and pump tests (if any) completed:** 10-08-98

**GROUND ELEVATION** (referred to mean sea level, msl): +132.91 ft.

**Well Bench Mark (description/location):** 4x4x6" slab at well head

**Elevation (msl):** 132.91 ft.

3. **Total depth of well below ground:** 295 ft.

4. **Hole size:** 14 inch dia. from 0 ft. to 295 ft. below ground

5. **Casing installed:** 8 in. I.D. x .250 in. wall solid section to 175 ft. below ground

6. **Casing Material/Slot Size:** Carbon Steel/Louver 14.6 sq inch per ft.

**PUMPING TESTS:**

1. **Step-Drawdown Test**
   - **Date:** 10/08/98
   - **Start water level:** 127.90 ft. below ground
   - **End water level:** 129.46 ft. below R.P.

2. **Long-term Aquifer Test**
   - **Date:** 10/08/98
   - **Start water level:** 129.25 ft. below R.P.
   - **End water level:** 129.46 ft. below R.P.

**Initial water level:** 127.90 ft. below ground

**Initial chloride:** 120 ppm

**Initial temperature:** 70°F

17. **Pump Test Procedures data & graphs (12/17/97 SDPTD & CRPTD Forms) attached?** X Yes No

18. **As-built drawings attached?** X Yes No

19. **Other remarks/comments:**

**Well Drilling Contractor (print):** Roscoe Moss Hawaii Inc

**Surveyor (print):** Ronald J Wagner

**Applicant (print):** Anne Earhart

**Signature:**

**Date:** 10/28/98

**Signature:**

**Date:**
## PART II.  (PERMANENT) PUMP INSTALLATION REPORT

20. Pump Installation Company: ____________________________

21. Name of person performing work: ____________________________

22. Date Pump Installation Completed: ____________________________

23. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: ____________________________
   - Motor type, H.P., Voltage, rpm: ____________________________
   - Depth of Pump Intake Setting _________ ft. below □ ground □ well bench mark
   - Depth to bottom of airline _________ ft. below □ ground □ well bench mark
   - Pumping Head is _________ ft. Type of flow meter: ____________ which measures in ______

24. As-built drawings attached? □ Yes □ No

25. Other remarks/comments: (See below)

<table>
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<tr>
<th>Pump Installation Contractor (print)</th>
<th>C-57 Lic. No.</th>
</tr>
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<tbody>
<tr>
<td>Signature</td>
<td>Date</td>
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</tbody>
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| Applicant (print)                    |                |
| Signature                            | Date          |

8.(cont’d) DRILLER’S LOG (cont’d):

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<th>Depths (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
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<td>Black basalt</td>
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<td>150 to 222</td>
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19. & 25. Remarks:

____________________________________________________

____________________________________________________
**CONSTANT-RATE PUMP TEST DATA**

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<td>Target Q</td>
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Water level measurements by: □ steel tape  □ pressure transducer  □ airline

START TEST  Date: 10-8-98  Time of day: 7:15A.M.

Flow Meter Reading Start: 01188300 gals

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<th>Actual elapsed time t</th>
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<th>Drawdown (unadjusted to nearest 0.1 ft)</th>
<th>Pumping rate Q (gpm)</th>
<th>EC (umhos)</th>
<th>Field Hatch Analysis (mg/l)</th>
<th>Temp. X °F or °C</th>
<th>Remarks (min)</th>
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Flow meter reading at end of pumped period: 1239000 gals

1 Chloride sampling required
2 Use same ending drawdown figure as start for recovery
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<td></td>
<td></td>
</tr>
</tbody>
</table>

END TEST  Date: 10-8-98  Time of day: 4:30 p.m.

ADDITIONAL REMARKS:

Person in charge of pump test (print): JoAnn Romano

Signature: ________________________________

The signature above indicates that the data reported on this form is accurate and true to the best of the person's knowledge who operated this pump test.
Kilauea Earhart Well • 1325-03 • 10/23/9

Eleu +134.22' (MSL)
Eleu +132.91' (MSL)

14" borehole

8" Blank Casing
Static W.L.
W.L. 105 gpm
169.90' (-35.64 msl)
175' (-42.09 msl)

295' (-162.09 msl)

8" Leader Casing
Roscoe Moss Hawaii, Inc.
91-259A Olai Street
Kapolei, HI. 96707

Attn: Tracy Runnells

Project: 1572

Subject: Well Head Elevation - Earhart Well Project # 1325-03,
Kalihiwai, Kauai, Hawaii   TMK: 5-2-10:28

Gentlemen;

On October 8, 1998, we performed a survey on the subject project and found the elevation of the well head (8" diameter pipe) to be 134.26 MSL. The concrete slab at the well head was 132.91 MSL.
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources

WELL COMPLETION REPORT

OCT. 28, 1998  1:39PM  ROCEE MOSS HAWAII 682 5866

OCT. 28, 1998  1:39PM  ROCEE MOSS HAWAII 682 5866

WELL COMPLETION REPORT

22/06 WOR Form

Part I. Well Construction  &  Part II. Permanent Pump Installation

Instructions: Please print or type and submit completed report within 60 days after well completion to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96822. An as-built drawing of the well and chemical analysis should also be submitted. For assistance call the Commission Regulation Branch at 808-586-4844 Extension 70226.

1. State Well No.: 3325-03  Well Name: Kikua-Earhart  Island: Kauai
2. Location/Address: 3700 Kaiau Road, Kauai  Tax Map Key: X-6-2-16-26 Lot 11-9-3

---

**PART I. WELI CONSTRUCTION REPORT**

3. Drilling Company: Roscoe Moss Hawaii Inc.
4. Name of driller who performed work: Rodney Couch
6. Type of rig/construction: Cable Tool
7. Date(s) Well Construction and pump tests (if any) completed: 10/06/98
8. DRILLER'S LOG: Please attach geologic log (if available or if required by permit)

<table>
<thead>
<tr>
<th>Depth (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 46</td>
<td>Brown Dirt, Clay</td>
</tr>
<tr>
<td>46 to 74</td>
<td>Hard Blue Basalt</td>
</tr>
<tr>
<td>74 to 116</td>
<td>Weathered molten basalt w/boulders</td>
</tr>
<tr>
<td>116 to 135</td>
<td>Weathered basalt-less boulders</td>
</tr>
</tbody>
</table>

10. Hole size: 14 inch dia. from 0 ft. to 285 ft. below ground
11. Casing installed: 8 in. I.D. x 250 in. well solid section to 175 ft. below ground
12. Material/Slot Size: Carbon steel/Louver 14.6 sq. inch per ft.
13. Initial water level: 127.90 ft. below ground.
14. Initial chloride: 70 ppm
15. Initial temperature: 70 °F
16. PUMPING TESTS: Reference Point (R.P.) used: Top of casing, which elevation is 138.22 ft.

(1) Step-Drawdown Test Date  
(2) Long-term Aquifer Test Date 10/7/98

Start water level: 129.25 ft. below R.P.
End water level: 129.46 ft. below R.P.

17. Pump Test Procedures data & graphs (127/17/97 SDPTD & CRPTD Forms) attached? Yes No
18. As-built drawings attached? Yes No
19. Other remarks/comments: (On back of this form)

---

Well Drilling Contractor (print): Roscoe Moss Hawaii Inc.  O-67 Lic. No. AC-16437

Signature: [Signature]

Date: 10/06/98

---

Surveyor (print): Roi T. J. Weingart

Signature: [Signature]

Date: 10/06/98

---

Applicant (print): Anne Earhart

Signature: [Signature]

Date: 10/06/98
WELL CONSTRUCTION PERMIT

Kilauea-Earhart Well, Well No. 132-03

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Kilauea-Earhart Well (Well No. 132-03) at 2975 Kalihewa Road, Kauai, HI 96739, on Lots 11-9-3,4, subject to the Hawaii Well Construction & Pump Installation Standards (1997) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 821, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basin ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basin ground water unless otherwise authorized by the Chairperson.

4. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

5. In the event that sub-surface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee must stop work and contact the Department's Historic Preservation Division (507-004S) immediately.

6. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of comparative water rights.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   a. Well completion report, dated and signed by a registered professional engineer.
   b. Elevation (referred to mean sea level, MSL) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

8. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

11. If the well is not to be used, it must be properly capped. If the well is to be abandoned, then the permittee must apply for a well abandonment permit in accordance with §13-168-12(c) prior to any well sealing or plugging work.

12. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: October 6, 1998
Expiration Date: October 6, 2000

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I do not hold a valid permit until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: ______________________ Date: ___________

Printed Name: ANNE EARHART Firm or Title: Owners

Dri1er's Signature: ______________________ License #: AC 16537 Date: ___________

Printed Name: Tracy Runnels Firm or Title: Rosecc Moss Hawai'i, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment

USGS
Department of Health, State Drinking Water, Wastewater, and Clean Water Branches
Kealial Department of Water Supply
Shanear Noguchi, Hawaiian Trust Co., Ltd.
Mr. Tracy Runnels
Roscoe Moss Hawaii, Inc.
91-259A Olai Street
Kapolei, Hawaii 96707

Dear Runnels:

Well Construction Permit
Kilauea-Earhart (Well No. 1325-03)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well construction activities but excludes installation work for your permanent pump. As part of the Chairperson’s approval, the following special conditions were added and are part of your permit under Permit Condition 12:

Special Conditions

1. Attached for your information is a copy of the Department of Health’s (DOH) review comments. Please note DOH’s requirements related to discharge of effluent from well drilling and testing activities.

2. Well No. 1325-02 shall be used as an observation well during the pump test for Well No. 1325-03.

3. The water well shall be cased with new steel casing conforming to one of the manufacturing standards listed in Table 6 of Hawaii Well Construction and Pump Installation Standards (January, 1997) and in the standards of AWWA publication ANSI/AWWA A100-90, as may be amended. The physical properties of the steel shall conform to ASTM A-242, ASTM A53, Type E or S, Grade B, or approved equal. The well casing shall be manufactured in accordance with applicable sections of ASTM A139, as may be amended.

This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. However, in accordance with the Commission’s April 15, 1998 Declaratory Ruling No. DEC-ADM98-G5, which states that:

"Permanent pump installation for capacities between 0-70 gpm and where the proposed use is for private individual needs in non-ground-water management areas may be allowed prior to the final pump installation permit issuance. When required as a condition of the well construction permit, subsequent pumping tests shall validate the acceptability of the permanent pump. The permanent pump installed prior to final pump installation permit issuance is subject to removal if the testing shows that a smaller pump is required to reduce the potential of affecting neighboring wells and localized upconing at the applicant’s well."


a permanent pump may be installed prior to the permanent pump installation permit issuance. If you qualify and wish to take advantage of this ruling, please include a written request to install the permanent pump prior to final pump installation permit issuance when you return to us your validated well construction permit.

To validate your permit, please sign and have the landowner sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use.

IMPORTANT - The well owner is responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

If you have any questions, please call the Commission staff at 587-0218.

Aloha,

MICHAEL D. WILSON
Chairperson

Enclosures
WELL CONSTRUCTION PERM

Kilauea-Earhart Well, Well No. 1325-03

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Kilauea-Earhart Well (Well No. 1325-03) at 2970 Kaliihiwai Road, Kauai, TMK 5-2-10:28 Lot 11-B-3, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division (387-0045) immediately.

6. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

8. The permittee shall comply with all applicable laws, rules, and ordinances; non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (January 23, 1997; HWCPIS). If the HWCPIS are not followed and as a consequence water is wasted or contaminated, a lien on the property may result.

10. The permit may be revoked by the Commission if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

12. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: October 6, 1998
Expiration Date: October 6, 2000

[Signature]
MICHAEVL WILSON, Chairperson
Commission on Water Resource Management

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed and understand that I do not hold a valid permit until I and the driller have signed, dated, and returned the permit to the Commission. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: ___________________________ Date: ______________
Printed Name: ___________________________ Firm or Title: ______________
Driller's Signature: ___________________________ License #: __________ Date: ______________
Printed Name: ___________________________ Firm or Title: ______________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment:

USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Kauai Department of Water Supply
Sharman Noguchi, Hawaiian Trust Co., Ltd.
**SECTION 1: WELL LOCATION INFORMATION**

<table>
<thead>
<tr>
<th>Island</th>
<th>KAUAI</th>
<th>Proposed Use</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquifer System</td>
<td>HANALEI</td>
<td>Proposed Withdrawal</td>
<td>70000</td>
</tr>
<tr>
<td>Aquifer Sector</td>
<td>KALÌHIWAI</td>
<td>System Sustainable Yield</td>
<td>16</td>
</tr>
</tbody>
</table>

**SECTION 2: WELL SECTION DATA** *(enter data in grey cells only)*

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>Solid Casing</th>
</tr>
</thead>
<tbody>
<tr>
<td>[data] ft., m.s.l.</td>
<td>[Material] Steel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ground Elevation</th>
<th>[Designation]</th>
</tr>
</thead>
<tbody>
<tr>
<td>[data] ft., m.s.l.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cement Grout</th>
<th>[Length] ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>[data] ft.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rock Packing</th>
<th>[Length] ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>[data] ft.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hole Diameter</th>
<th>[Wall Thickness] 25 in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>[data] in.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Depth</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[3608 ft.]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Head</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[data] ft., m.s.l.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calculated Aquifer Thickness</th>
<th>[Material] Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>[3608 ft.]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County Water Supply (Y/N ?)</th>
<th>[Data] No</th>
</tr>
</thead>
</table>

**SECTION 3: CHECKLIST** *(values to check are shaded)*

- **Well Depth**
  - Theoretical Thickness of Aquifer: 3608 ft.
  - 1/4 Aquifer Thickness: 902 ft.
- **Depth of Well below Sea Level**: 163 ft., okay (refer to HWCPIS Section 2.2)

- **Well Casing**
  - Minimum Wall Thickness
    - Material: Steel
    - County or Non-County: non-county
    - Minimum Thickness per standards: 0.250 in.
    - Wall Thickness Provided: 0.250 in., okay (refer to HWCPIS Section 2.4 c)
  - Minimum Length of Solid Casing
    - 90% of ground to top of aquifer: 39.6 ft.
    - Length of solid casing Provided: 145 ft., okay (refer to HWCPIS Section 2.4 d)
  - Casing Material: #4444
    - #4444 (refer to HWCPIS Section 2.4 e)
  - Annular Space
    - If the cell above reads #N/A, reference HWCPIS)
  - Depth of Grouting
    - Calculated Depth of Grouting: 30.8 ft.
    - Depth of Grouting provided: 124 ft., okay (refer to HWCPIS Section 2.6 c)
    - Thickness of Annular Space: 3 in., okay (refer to HWCPIS Section 2.6 d)
TO: Honorable Lawrence Miki, Director
Department of Health
Attention: Dennis Tulang, Wastewater Branch
William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
Kilauea-Earhart (Well No. 1325-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by October 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[X] For the applicant's information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

[X] Other relevant DOH rules/regulations, information, or recommendations are attached.

[X] No comments/objections however, be aware of possible contamination.

Contact Person: Lori N. Kajiwara
Phone: 5864290

Signed: Lori N. Kajiwara

Date: 9.24.98
September 24, 1998

To: Lenore Nakama, Commission on Water Resource Management

From: Lori Kajiwara, Planning & Design Section, Wastewater Branch

Subject: Well Construction Permit Application
          Kilauea - Earhart (Well No. 1325-03)
          TMK: (4) 5-2-10: 28

Regarding the above mentioned subject, the following is a source possible wastewater contamination located near the proposed well site.

DOH-Wastewater Branch Individual Wastewater System (IWS) File # 3109

for address: 2960 G Kalihiwai Road, Kilauea

Submit Date: November 21, 1995
Plan Approval Date: November 30, 1995
Inspection Date: August 29, 1997
System Approved Date: December 9, 1997
DOH Engineer: Felix Udasco

For: Septic Tank with disposal system - Trench serving 5 bedroom dwelling

For more information - please contact Felix Udasco (the original reviewing engineer) of the Wastewater Branch on Oahu at telephone 586-4294 or Joe Tateyama of the Wastewater Branch at the Kauai District Health Office at telephone 241-3323.
TO: Honorable Lawrence Miike, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
   Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
         Kilauea-Earhart (Well No. 1325-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by October 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11- .

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ] is [ ] not located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: William Wong
Phone: 586-4285

Signed: William Wong
Date: 09/22/98
The Department of Health, Clean Water Branch has the following comments:

1. For Well-Drilling Activities

Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Chapter 11-55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at (808) 586-4309 or by fax at (808) 586-4352.

2. For Well Pump Testing

The discharger shall take all measures necessary to prevent the discharge of pollutants from entering state waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

JS/cr
TO:       Honorable Lawrence Mikie, Director
          Department of Health
          Attention: Dennis Tuiang, Wastewater Branch
          William Wong, Safe Drinking Water Branch

FROM:    For Michael D. Wilson, Chairperson
          Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
          Kilauea-Earhart (Well No. 1325-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or
inconsistencies with the programs, plans, and objectives specific to your department. Please respond
by returning this cover memo form by October 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this
permit application, request additional information, or request additional review time, please contact
Lenore Nakama of the Commission staff at 587-0218.

LN:ss
Attachment(s)

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at
    least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply
    with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-30-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per
    year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical
    presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source
    increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and
    backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and
    by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow
    prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [yes] is not located near the proposed well site
    (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: William Wong
Phone: 586-4258

Signed: [Signature]  Date: 09/22/98
The Department of Health, Clean Water Branch has the following comments:

1. For Well-Drilling Activities

Any discharge to State waters of treated process wastewater effluent associated with well drilling activities is regulated by Hawaii Administrative Rules, Chapter 11-55, Appendix I, effective September 22, 1997. Treated process wastewater effluent covered by this general permit includes well drilling slurries, lubricating fluids wastewaters, and well purge wastewaters. This general permit does not cover well pump testing. The applicable Notice of Intent Forms and filing fee shall be submitted at least thirty (30) days before the start of discharge to the Department of Health, Clean Water Branch at 919 Ala Moana Boulevard, Room 301, Honolulu, Hawaii 96814-4920 or P.O. Box 3378, Honolulu, Hawaii 96801-3378. Inquiries may be directed to the Clean Water Branch at (808) 586-4309 or by fax at (808) 586-4352.

2. For Well Pump Testing

The discharger shall take all measures necessary to prevent the discharge of pollutants from entering state waters. Such measures shall include, if necessary, containment of the initial discharge until the discharge is essentially free of pollutants. If the discharge is entering a stream or river bed, best management practices shall be implemented to prevent the discharge from disturbing the clarity of the receiving water. If the discharge is entering a storm drain, the discharger must obtain written permission from the owner of that storm drain prior to discharge. Furthermore, best management practices shall be implemented to prevent the discharge from collecting sediments and other pollutants prior to entering the storm drain.

JS/cr
Mr. Tracy Runnels  
Roscoe Moss Hawaii, Inc.  
91-259A Olai Street  
Kapolei, HI 96707

Dear Mr. Runnels:

**Well Construction / Pump Installation Permit Application for Well No. 1325-03**

We acknowledge receipt, on September 11, 1998, of your completed well construction/pump installation permit application for the Kilauea-earhart Well (Well No. 1325-03). You can expect your application to be processed within ninety (90) days from this date.

For your information, the process of constructing a well is normally regulated and permitted in two (2) steps. First, a well construction permit is issued for drilling and testing purposes only. Based upon information provided by you through a Well Completion Report Part 1 (Well Construction), a pump installation permit (upon completed application) may then be issued to authorize pump work. If a pump is installed then a Well Completion Report Part 2 (Pump Installation) is required.

If you have any questions about your permit application, please contact Lenore Nakama of the Commission staff at 587-0218.

Sincerely,

TIMOTHY E. JOHNS  
Deputy Director

LN:ss
TO: Honorable Lawrence Miike, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
               William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
       Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
         Kilauea-Earhart (Well No. 1325-03)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or
inconsistencies with the programs, plans, and objectives specific to your department. Please respond
by returning this cover memo form by October 9, 1998.

Please find a map, attached, to locate the proposed well. If you have any questions about this
permit application, request additional information, or request additional review time, please contact
Lenore Nakama of the Commission staff at 587-0218.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at
   least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply
   with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per
   year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical
   presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source
   increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and
   backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and
   by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow
   prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant’s information, a source of possible wastewater contamination [ ] is [ ] is not located near the proposed well site
   (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: ___________________________ Phone: ___________________________

Signed: ___________________________ Date: ___________________________
August 12, 1998

DLNR/COMMISSION ON WATER RESOURCE MGMNT
P O BOX 621
HONOLULU, HI 96809
ATTN: LENORE NAKAMA

RE: STATE WELL #1325-02
KILAUEA EARHART WELL & SUBSEQUENT "TEST BORE"

Dear Lenore:

Since our correspondence on March 31, 1998, we have moved our rig upgradient of the above referenced well and drilled a 295' deep 14" open bore hole. This "test bore" being at 132 elevation msl and approximately 100 yards from the currently permitted well + 97 l' elevation well. By moving away from the stream and out of the valley floor for the second bore, we have obtained a good well with basal lens characteristics. Therefore, our intentions are to remove the casing from our first well and install it in the test bore along with additional new pipe for completion, testing and permanent pump installation. This well easily yields the 80 gpm requirements.

The partial well construction report dated 3/9/98, for our first bore showed a maximum yield of 24 gpm, 140 ppm chloride water. The "test bore" was tested informally twice at 75 gpm, and 110 gpm. Drawdown stabilized at 25' and 40' respectively with 90 ppm chlorides. We agree that long term test pumping should include simultaneous water level recordings of the idle first well, after which the abandonment, or completion of the first well will be determined. Please accept our application for permit with regards to the "test bore" for Commission approval.

Please advise us of our options aside from the costly abandonment of the first well. Can a surface casing with a grouted annulus and concrete base be installed for monitoring purposes, future development or backup needs? The existing 16" conductor casing in well could be pulled and a 12" steel casing 20' long cemented in place by the use of a cement basket would leave the door open for future completion as a 6" cased well. Your consideration and advise on these matters is greatly appreciated.

Sincerely,

Tracy Runnells, Drilling Operations

cc: Anne Earhart
Sharman Noguchi (Hawaiian Trust)
APPLICATION FOR PERMIT

1. APPLICANT: (circle primary contact)  
   (a) WELL OWNER  
   Firm/Name: Ann Earhart  
   Contact Person: Same  
   Address: 2970 Kalilahw Rd  
   Honolulu, HI 96814  
   Phone: (77) 494-8712  
   Fax: (808) 682-5866  
   (b) LANDOWNER  
   Firm/Name: Hawaiian Trust Co., Ltd.  
   Contact Person: Sharman Naguchi  
   Address: 111 S. King St  
   Honolulu, HI 96813  
   Phone: (808) 538-4563  
   Fax: (808) 538-4563  
   (c) CONTRACTOR  
   Firm/Name: Roscoe Moss Hawaii, Inc.  
   Contact Person: Tracy Runnels  
   Address: 91-259A Olai St  
   Kapolei, HI 96707  
   Phone: (808) 682-5856  
   Contractors C-57 License No. AC-16437

2. WELL LOCATION/NAME: Kilauea - Earhart Well  
   Island: Kauai  
   Address: 2970 Kalilahw Rd  
   Address: P.O. Box 621  
   Honolulu, HI 96809  
   Phone: (808) 538-4563  
   Fax: (808) 538-4563  
   Map Key: 5-2-10:28 Lot 11-B-3  
   (Attach a USGS map, scale 1"=2000", and a property tax map showing well location referenced to established property boundaries.)

3. (a) PROPOSED WORK:  
   X Drill New Well  
   X Modify Existing Well  
   X Install New Pump  
   X Abandon/Seal*  
   X Replace Pump  
   X Other:  
   * Be sure to complete and submit well abandonment report upon completion of work.

   (b) WELL TYPE:  
   X Dug  
   X Bored  
   X Driven  
   X Dilled  
   X Radial  
   X Other:  
   Is this well a part of a battery of wells?  
   Yes  
   No  
   (Briefly describe and fill in diagram on back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: 80 gallons per minute  
   Pump Type:  
   X Submersible  
   X Centrifugal  
   X Other:  
   Motor:  
   X Electric, rated horsepower: 5 HP  
   If Pump Replacement, Existing Pump Capacity:  
   gallons per minute

5. PROPOSED USE:  
   X Domestic (individual, noncommercial water use)  
   X Irrigation (crop)  
   X Other (explain):  
   X Industrial  
   X Military  
   X Municipal (including hotels, stores, etc.)  
   X Other (explain):  
   X Commercial (other)  
   X Institutional  
   X Other (explain):  
   X Reclamation (other)  
   X Other (explain):  

6. (a) PROPOSED AMOUNT OF WITHDRAWAL:  
   70,000 gallons per day  
   (b) METHOD OF FLOW MEASUREMENT: X Flow-meter  
   X Open-pipe  
   X Orifice Plate  
   X Weir

7. PENDING ACTIONS:  
   X No  
   X COUA  
   X SMA  
   X EIS  
   X EA  
   X Other:  
   X NONE  
   X Other (explain):  
   Completion Date:  
   
8. REMARKS, EXPLANATIONS:  
   Second 14" diameter, 295' "test bore" has proven favorable to incomplete well #1325-02. Survey, pump testing and titration of well water has been done to insure design & yield. Cover letter with this application outlines reasons and future use.  
   (If more space is needed, continue on back)

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Pacific Century Trust, Successor Trustee to the Hawaiian Landowner and Trustee for the Hawaiian Trust Co. Ltd

Signature:  
Date:  

Contractor: Roscoe Moss Hawaii, Inc.

Signature:  
Date:  

By:  
Date:  

For Official Use Only:

Date Received  
Date Accepted  
Field Checked By  
Date

Aquifer System Name  
State Well No.

11/03/96 WCPI Form
APPLICATION FOR PERMIT

Field Check by

Date

 Appalachia

Name

Address

Date

water use data

State Well No.

1325-03

Form 110006 WCP

Date

1. APPLICANT: (circle primary contact)
   (a) Primary Fax: (808) 682-5866
   (b) LANDOWNER
      Firm Name: Hawaiian Trust Co. Ltd.
      Contact Person: Sharmang Noguchi
      Address: 2970 Kalihui Rd. Honolulu, HI 96813
   (c) CONTRACTOR
      Firm Name: Roscoe Moss Hawaii, Inc.
      Contact Person: Tracy Runnells
      Address: 91-259 Old St. Kapolei, HI 96707

   2. WELL LOCATION/NAME: Kilauea - Earhart Well
      Island: Kauai
      Address: 2970 Kalihui Rd. Tax Map Key: X-5-2:10:28 Lot 11-B

   3. (a) PROPOSED WORK:
      [ ] Dist. New Well [ ] Deepen [ ] Install New Pump
      [ ] Modify Existing Well [ ] Redrill [ ] Modify Pump
      [ ] Abandon/Seal [ ] Replace Pump
      * Be sure to complete and submit well abandonment report upon completion of work.

   4. PROPOSED PUMP INFORMATION:
      Rated Pump Capacity: 80 gallons per minute
      Pump Type:
      [ ] Deep Well Turbine [ ] Rotary [ ] Propeller
      [ ] Submersible [ ] Rotary-Displacement [ ] Reciprocating
      [ ] Centrifugal [ ] Rotary-Gear [ ] Impulse
      Motor: [ ] Electric, rated horsepower

   5. PROPOSED USE:
      [ ] Municipal (including hotels, stores, etc.) [ ] Military
      [ ] Domestic (individual, noncommercial water system) [ ] Industrial
      [ ] Irrigation (crop) [ ] Other (explain)

   6. (a) PROPOSED AMOUNT OF WITHDRAWAL: 70,000 gallons per day

   7. PENDING ACTIONS:
      [ ] DOUG [ ] SMA [ ] EIS [ ] EA

   8. REMARKS, EXPLANATIONS:
      Second 14" diameter, 295' "test bore" has proven favorable to incomplete well #1325-02. Survey, pump testing and titration of well water has been done to insure design & yield. Cover letter with this application outlines (if more space is needed, continue on back)

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.
8. Remarks, Explanations (cont'd): work to date. We request a permit to complete this authorized "test bore" designed per well section drawing below.

**9. PROPOSED WELL SECTION**

Elevation at top of casing 134 ft, msl.

Ground Elevation: 132 ft, msl.

Cement Grout: 124 ft.

Rock Packing: 171 ft.

Hole Diameter: 14 in.

Total Depth: 295 ft.

Ground Elevation: 132 ft, msl.

Water level +5.6\text{elev msl}

**Sold Casing:**

- **Material:** Steel
- **Length:** 145 ft
- **Diameter:** 8 in
- **Wall thickness:** 0.250 in

**Casing:**

- **Perforated Screen**
- **Material:** Steel louver
- **Length:** 150 ft
- **Diameter:** 8 in
- **Wall thickness:** 0.250 in
- **Openings:** 14.6 sq. in/A.F.

**Open Hole:**

- **Length:** NA
- **Diameter:**

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
APPLICATION FOR PERMIT

X Well Construction or X Pump Installation

Instructions: Please print in ink or type and send completed application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Application must be accompanied by a non-refundable filing fee of $25.00 payable to the Dept. of Land and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225.

1. APPLICANT: (circle primary contact xxxxxx c) Primary Fax: (808) 682-5866
   (a) WELL OWNER
      Firm/Name Anne Earhart
      Contact Person Same
      Address 2970 Kaliihiwai Rd
      Honolulu, HI 96813
   (b) LANDOWNER
      Firm/Name Hawaiian Trust Co., Ltd.
      Contact Person Sharman Noguchi
      Address 584 Kuliouou Rd Suite 600
      Honolulu, HI 96813
   (c) CONTRACTOR
      Firm/Name Roscoe Moss Hawaii, Inc.
      Contact Person Tracy Runnels
      Address 91-259A Olai St, Kapolei, HI 96707

2. WELL LOCATION/NAME: Kilauea - Earhart Well
   Field Checked By
   Date Accepted ______ _
   For Date Received ______ _
   Island Kauai
   Address 2970 Kaliihiwai Rd
   Tax Map Key 5-2-10:28 Lot 11-B-7

3. (a) PROPOSED WORK: Drill New Well ☐ Deepen ☐ Install New Pump
      ☐ Modify Existing Well ☐ Redrill ☐ Modify Pump
      ☐ Abandon/Seal * ☐ Replace Pump
      * Be sure to complete and submit well abandonment report upon completion of work.

   (b) WELL TYPE:
      ☐ Dug ☐ Bored ☐ Driven ☐ D X Drilled ☐ Radial
      Is this well a part of a battery of wells? ☐ Yes ☐ No
      (Briefly describe and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: 80 gallons per minute
   Pump Type:
      ☐ Submersible ☐ Rotary-Displacement ☐ Rotary-Gear
      ☐ Centrifugal ☐ Reciprocating ☐ Impulse
      Motor:
         ☐ Deep Well Turbine ☐ Propeller ☐ Diesel
         ☐ Rotary-Displacement ☐ Gas ☐ Reciprocating
         ☐ Rotary-Gear ☐ Impulse ☐ Electric, rated horsepower: 5 HP
   If Pump Replacement, Existing Pump Capacity: _______ gallons per minute

5. PROPOSED USE:
   ☐ Municipal (including hotels, stores, etc.) ☐ Military
   ☐ Domestic (individual, noncommercial water sys.) ☐ Industrial
   ☐ Irrigation (crop) ☐ Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: 70,000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT:
      ☐ Flow-meter ☐ Open-pipe ☐ Orifice Plate ☐ Weir

7. PENDING ACTIONS:
   ☐ CDUA ☐ SMA ☐ EIS ☐ EA ☐ NONE ☐ Other (explain)

8. REMARKS, EXPLANATIONS: Second 14" diameter, 295' "test bore" has proven favorable to incomplete well #1325-02. Survey, pump testing and titration of well water has been done to insure design & yield. Cover letter with this application outlines
   (if more space is needed, continue on back)

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of the approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permitted work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Well Owner Anne Earhart
Landowner Hawaiian Trust Co., Ltd
Contractor Roscoe Moss Hawaii, Inc.

Signature ____________________________  Signature ____________________________  Signature ____________________________
Date _______ ____________________________  Date _______ ____________________________  Date _______ ____________________________

For Official Use Only:
Date Received ____________________________  Date Accepted ____________________________  Field Checked By ____________________________
Date ____________________________  Date ____________________________  Date ____________________________

Longitude ____________________________  Latitude ____________________________  Aquifer System Name ____________________________
Stale Well No. ____________________________  

11/06/06 WCPI Form
8. Remarks, Explanations (cont'd): work to date. We request a permit to complete this authorized "test bore" designed per well section drawing below.

9. PROPOSED WELL SECTION

Elevation at top of casing
134 ft. msl.

Cement Grout: 124 ft.

Ground Elevation: 132 ft. msl.

Rock Packing: 171 ft.

Hole Diameter: 14 in.

Total Depth: 295 ft.

Water level +5.6' elev msl

Solid Casing:

<table>
<thead>
<tr>
<th>Material</th>
<th>Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>145 ft.</td>
</tr>
<tr>
<td>Diameter</td>
<td>8 in.</td>
</tr>
<tr>
<td>Wall thickness</td>
<td>.250 in.</td>
</tr>
</tbody>
</table>

Openings: 14.6 sq. in./A.F.

Open Hole:

<table>
<thead>
<tr>
<th>Material</th>
<th>Perforated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>NA</td>
</tr>
<tr>
<td>Diameter</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
WHILE YOU WERE OUT

Message

- TELEPHONED
- CALLED TO SEE YOU
- WANTS TO SEE YOU
- PLEASE CALL
- WILL CALL AGAIN
- URGENT
- RETURNED YOUR CALL
Mr. Tracy Runnels
Roscoe Moss Hawaii, Inc.
91-259A Olai Street
Kapolei, HI 96707

Dear Mr. Runnels:

Kilauea-Earhart Well No. 1325-02

Thank you for your March 8, 1998 letter, updating us on the status of the drilling and construction of the subject well and informing us of your plans to drill a second well.

As was discussed during a March 13, 1998 telephone conversation with Lenore Nakama, the drilling of a temporary "test bore" for the purposes of immediate determination of hydrologic conditions at the site may proceed without permit from the Commission on Water Resource Management, pursuant to Hawaii Well Construction and Pump Installation Standards (January, 1997; HWCPIS). We understand that an application for a well construction permit will be made if the test bore shows adequate yield. (You may consider conducting any pumping tests in accordance with HWCPIS, and using the Well No. 1325-02 as an observation well during the tests, as this will be required under a well construction permit to convert the test bore into a production well.)

For your information, we are planning to better define "test bore" in the next update of the HWCPIS to clarify the specific circumstance(s) under which drilling may proceed without a well construction permit.

Thank you also for providing the well completion report for the work completed to date for Well No. 1325-02. As you have indicated the well is not yet complete, we will look forward to receiving a final well completion report in the future. Please do not forget to show the concrete base and elevation benchmark on your as-built section. However, should you decide to abandon Well No. 1325-02, please complete and return the attached application to abandon/seal a well.

If you have any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

EDWIN T. SAKODA
Acting Deputy Director

LN:ss
Attachment
State of Hawaii  
COMMISSION ON WATER RESOURCE MANAGEMENT  
Department of Land and Natural Resources  

WELL COMPLETION REPORT  

Instruction: Please print or type and submit completed report within 30 days after well completion to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. An as-built drawing of the Well and chemical analysis shall also be submitted. For assistance call the Commission Regulation Branch at 587-0225, or 1-800-468-4644 Extension 670225. 

1. State Well No.: 1325-02  
   Well Name: KILAUEA-earhart  
   Island: KAUAI  
2. Location/Address: 2970 KALIHIWAI ROAD  
   Tax Map Key: 5-2-10:28  
   Lot 11-B-3  

PART I. WELL CONSTRUCTION REPORT  

3. Drilling Company: ROSCOE MOSS HAWAII, INC.  
4. Name of driller who performed work: RODNEY COUCH, T.J. SMITH  
5. Type of rig/construction: CABLE TOOL  
6. Date(s) Well Construction and pump tests (if any) completed: NOT COMPLETE AS OF 3/9/98  
7. GROUND ELEVATION (referenced to mean sea level, msl): 97.1 ft.  
   Well Bench Mark (description/location): TOP 16" conductor pipe  
   Elevation(msl): 98.92 ft.  
8. DRILLER'S LOG: Please attach geologic log (if available or if required by permit)  

<table>
<thead>
<tr>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
<th>Depths (ft.)</th>
<th>Rock Description, Water Level, Dates, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 3</td>
<td>red, brn, silt, clay</td>
<td>10 to 22</td>
<td>basalt boulders</td>
</tr>
<tr>
<td>3 to 10</td>
<td>red molten yellow clay</td>
<td>22 to 32</td>
<td>dense basalt</td>
</tr>
</tbody>
</table>

9. Total depth of well below ground: 189 ft.  
10. Hole size:  
    
    | 14     | inch dia. from 0 ft. to 170 ft. below ground |
    | 8      | inch dia. from 170 ft. to 189 ft. below ground |
    | 8      | inch dia. from 189 ft. to 110 ft. below ground |
11. Casing installed:  
    8 in. I.D. x .250 in. wall solid section to 110 ft. below ground  
    8 in. I.D. x .250 in. wall perforated section to 170 ft. below ground  
    Casing Material/Slot Size: steel .187" louvers  
12. Annulus:  
    Grouted from incomplete ft. below ground to ft. below ground  
    Gravel packed from incomplete ft. below ground to ft. below ground  
13. Initial water level: 88.5 ft. below ground.  
14. Initial chloride: 140 ppm  
15. Initial temperature: 71° F  
16. PUMPING TESTS: Reference Point (R.P.) used: ________, which elevation is ________ ft.  
   (1) Step-Drawdown Test Date ________, (2) Long-term Aquifer Test Date ________,  
   Start water level ________ ft. below R.P.  
   End water level ________ ft. below R.P.  
   Start water level ________ ft. below R.P.  
   End water level ________ ft. below R.P.  
17. Aquifer Pump Test Procedures data & graphs (1/96 LTAT Form) attached? Yes X No  
18. As-built drawings attached? Yes X No  
19. Other remarks/comments: (On back of this form)  

Well Drilling Contractor (print) ROSCOE MOSS HAWAII, INC. C-57 Lic. No. AC-16437  
Signature: [Signature]  
Date: 3/9/98  
Surveyor (print)  
Signature: [Signature]  
Lic. No.  
Date:  
Applicant (print)  
Signature: [Signature]  
Date:
**PART II. (PERMANENT) PUMP INSTALLATION REPORT**

20. Pump Installation Company: ____________________________

21. Name of person performing work: _______________________

22. Date Pump Installation Completed: ______________________

23. PUMP INSTALLATION:
   - Pump Type, Make, Serial No.: __________________________ Capacity: _______ gpm
   - Motor type, H.P., Voltage, rpm: _________________________
   - Depth of Pump Intake Setting _______ ft. below _________, which elevation is _________ ft.
   - Depth to bottom of airline _______ ft. below _________, which elevation is _________ ft.
   - Pumping Head is _______ ft. Type of flow meter: ________ which measures in _______.

24. As-built drawings attached? Yes __ No __

25. Other remarks/comments: (See below)

<table>
<thead>
<tr>
<th>Pump Installation Contractor (print)</th>
<th>C-57 Lic. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature __________________________</td>
<td>Date __________</td>
</tr>
<tr>
<td>Applicant (print) ___________________</td>
<td></td>
</tr>
<tr>
<td>Signature __________________________</td>
<td>Date __________</td>
</tr>
</tbody>
</table>

8. (cont'd) DRILLER'S LOG (cont'd):

<table>
<thead>
<tr>
<th>Dates (ft.)</th>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
<th>Dates (ft.)</th>
<th>Water Level</th>
<th>Depth (ft.)</th>
<th>Rock Description, Remarks,</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 to 37</td>
<td>red brn clay</td>
<td>95 to 102</td>
<td>dense basalt</td>
<td>102 to 104</td>
<td>weathered basalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37 to 39</td>
<td>weathered basalt</td>
<td>104 to 125</td>
<td>solid basalt w.l. 87.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39 to 50</td>
<td>gray basalt</td>
<td>125 to 161</td>
<td>weathered basalt layered</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 to 61</td>
<td>gray black basalt dense</td>
<td>161 to 165</td>
<td>vesicular basalt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61 to 66</td>
<td>pack alluvium</td>
<td>165 to 170</td>
<td>red &amp; blue loose rock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66 to 70</td>
<td>weather basalt w/calcite</td>
<td>170 to 172</td>
<td>solid basalt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 to 90</td>
<td>black basalt dense</td>
<td>172 to 190</td>
<td>loose red sandy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90 to 95</td>
<td>weathered basalt</td>
<td>190 to 193</td>
<td>med hard blue rock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>193 to 200</td>
<td>med hard blue rock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 to 203</td>
<td>med hard blue rock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19 & 25. Remarks: _________________________________________

________________________________________

________________________________________
March 9, 1998

KILAUEA EARHART WELL #1325-02

Informal Test Pumping Data

<table>
<thead>
<tr>
<th>Well Depth</th>
<th>W.L.</th>
<th>G.P.M.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>167'</td>
<td>88.1 (+10')</td>
<td>80</td>
<td>Well breaks suction in 12 minutes at 145'. Chlorides 100 p.p.m.</td>
</tr>
<tr>
<td>180'</td>
<td>88.5 (+10.4')</td>
<td>30</td>
<td>Well pumps 30 g.p.m. short time. Starts breaking suction at 145'. Chlorides 140 p.p.m.</td>
</tr>
<tr>
<td>190'</td>
<td>88.1 (+10')</td>
<td>30</td>
<td>Well stabilizes at 140' for short term of test. (1 hour) Chlorides 320 p.p.m.</td>
</tr>
<tr>
<td>203'</td>
<td>94 (+4')</td>
<td>80</td>
<td>Water too salty for Hach titration. County lab also unable to titrate water sample. No drawdown recorded.</td>
</tr>
</tbody>
</table>

Well cemented back to 189'

<table>
<thead>
<tr>
<th>Well Depth</th>
<th>W.L.</th>
<th>G.P.M.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>189'</td>
<td>88.5</td>
<td>24</td>
<td>Water level stabilizes at 131' or 42.5' drawdown 24 g.p.m. 140 p.p.m. chlorides</td>
</tr>
</tbody>
</table>
March 8, 1998

State of Hawaii
DLNR
Commission on Water Resource Management
P.O. Box 621
Honolulu, HI 96809

ATTN: LENORE NAKAMA

RE: State well #1325-02
Kilauea Earhart Well

Dear Lenore,

Since my letter of February 27, 1998 (attached), we have neat cemented well back to 189 ft. from ground surface. Water level has returned to 88.5 ft. and well yield is 24 g.p.m. at 42.5 ft. drawdown stabilized. Water test with a field Hach kit is 140 p.p.m. chlorides.

The owner expressed a definite need for 80 g.p.m. and would like to drill another test well on the property. Should the second test well show 80 g.p.m. yield, our first well would most likely be sealed. However, poor results on the second well may require development of both.

Please advise me as to any submittals required by the Commission to drill this test well. We will be choosing a location on the property this week, and would like to get started with drilling while we have equipment available on site now. Well casing is installed in well #1, but not grouted or gravel packed. I have attached a Well Completion Report for your information, although the well is not complete. Should a second hole prove to be better, we can still pull the 8 in. casing from the first well for use on the second by leaving well at this status.

Always Appreciative,

Tracy Runnells

TR/sr
February 27, 1998

Ann G. Earhart  
C/O Ann K. Wigley  
105 Cresent Bay Drive, Suite M  
Laguna Beach, CA 92651

RE: KILAUEA-EARHART WELL NO. 1325-02

Dear Ann:

We have deepened your well to 203'. The water level fell approximately 6' and subsequent pump testing shows 80 gpm capacity, but the water is salty.

During our 10' incremented deepening of the well we pumped the well when 190' was reached.

Pumping Data at 190':

<table>
<thead>
<tr>
<th>Total depth of well</th>
<th>190'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static water level (idle)</td>
<td>88'</td>
</tr>
<tr>
<td>Water level at 30 gpm</td>
<td>140'</td>
</tr>
<tr>
<td>Water quality</td>
<td>320 ppm chlorides</td>
</tr>
</tbody>
</table>

We recommend neat cementing well back to 190'. Installing test pump at 180' and retesting yield and chlorides. Pump test at this depth previously was with the pump set at 145'. With luck the 320 ppm chlorides will return and additional drawdown capacity from a deeper pump setting will increase well capacity to 40 gpm or so.

Any consideration of drilling a second well after this final 190' depth pump test should be done with a geologists advice as to its location.

We can provide geologic consultation, as we have had a geologist on site during drilling operations. I will also prepare a proposal to drill a less expensive test well when the existing well is complete and its capacity is known. There is no guarantee that this well will have the same results after cementing it back to 190'.
I assure you we will give our best effort to maximize this well with State Approvals. Some casing design changes may also be needed. I will visit the job on 3/3/98 and give you another update.

Sincerely,

Tracy Runnels
Drilling Activities

cc: Lenore Nakama, State Water Commission
    Robert E. Truskowski, Landscape Architects

TR: sr
Roscoe Moss Hawaii, Inc.
91-259A Olai Street
Kapolei, HI. 96707

Attn: Tracy Runnells

Project: 1572

Subject: Well Head Elevation - Earhart Well Project # 1325-02,
Kalihiwai, Kauai, Hawaii  TMK: 5-2-10-27

Gentlemen;

On January 23, 1998, we performed a survey on the subject project and found the elevation of the well head (16" diameter pipe) to be 98.92 MSL. The ground elevation at the well head was 97.1 MSL.

WAGNER ENGINEERING SERVICES, INC.

February 3, 1998
P.O. Box 851
Hanalei, Hawaii 96714

Ronald J. Wagner
Licensed Professional Land Surveyor Certificate No. 5074
Kilauea-Eastport Well # 1305-02  
3/9/98

Top 16" conductor 98.92 m.t.

Bottom 16" pipe 17'

14" dia. hole
Annulas open

8" open hole

Neat Cement

Grd. Elev. 97.1 m.

Current Depth 189' after running back

Total Depth Drilled 203'

8" 250 wall blank

8" 250 wall lower
February 27, 1998

Ann G. Earhart  
C/O Ann K. Wigley  
105 Crescent Bay Drive, Suite M  
Laguna Beach, CA  92651

RE: KILAUEA–EARTHART WELL NO. 1325–02

Dear Ann:

We have deepened your well to 203'. The water level fell approximately 6' and subsequent pump testing shows 80 gpm capacity, but the water is salty.

During our 10' incremented deepening of the well we pumped the well when 190' was reached.

Pumping Data at 190':

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
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<td>190'</td>
</tr>
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</tr>
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</tr>
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I assure you we will give our best effort to maximize this well with State Approvals. Some casing design changes may also be needed. I will visit the job on 3/3/98 and give you another update.

Sincerely,

Tracy Rungeles
Drilling Activities

cc: Lenore Nakama, State Water Commission
    Robert E. Truskowski, Landscape Architects

TR: sr
WE ARE SENDING YOU XX Attached ☐ Under separate cover via ___________________________ the following items:

☐ Shop drawings  ☐ Prints  ☐ Plans  ☐ Samples  ☐ Specifications  
☐ Copy of letter  ☐ Change order  ☐

<table>
<thead>
<tr>
<th>COPIES</th>
<th>DATE</th>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>DRILL LOGS ON EARHART WELL (L 1925-02)</td>
</tr>
</tbody>
</table>

THESE ARE TRANSMITTED as checked below:

☐ For approval  ☐ Approved as submitted  ☐ Resubmit ____ copies for approval
☐ For your use  ☐ Approved as noted  ☐ Submit ____ copies for distribution
☐ As requested  ☐ Returned for corrections  ☐ Return ____ correctedprints
☐ For review and comment  ☐ 19 ☐ PRINTS RETURNED AFTER LOAN TO US
☐ FOR BIDS DUE 19 ☐ 03

REMARKS AS YOU REQUESTED

[Signature]  
SIGNED: [Signature]

If enclosures are not as noted, kindly notify us at once.
## DRILLING LOG

**Date:** 12-11-1997  
**Job No.:** 1591R  
**Location:** Oahu

### General Information
- **Driller:** Rodney Couch  
- **Helper:** John Romano  
- **Customer:** _____________________  
- **Location:** Oahu  
- **Rig:** Betsy

### Equipment
- **Bit-Size:** 14"  
- **Casing-Size:** 11"  
- **Depth Start:** ft.  
- **Depth Stop:** ft.  
- **Feet Drilled:** 12

### Remarks:
- **DRIVE GUY STAKES + PUT UP GUY WIRES**
- **BUILT UP DRILL BIT TO 14" + REBUILT BOTTOM OF BIT**
- **SCREWED ON STEM + BIT - BEGIN DRILLING**
- **CLAY - Silt dry, stiff**
- **Reddish brown**
- **CLAY**
- **RED, MOTTLED yellow**
- **Basalt breccia slightly weathered exterior dense centers - hard drilling**
- **INSTALL 11' of conductor casing (16")**

### Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>DRIVE GUY STAKES + PUT UP GUY WIRES</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>BUILT UP DRILL BIT TO 14&quot; + REBUILT BOTTOM OF BIT</strong></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td><strong>SCREWED ON STEM + BIT - BEGIN DRILLING</strong></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><strong>CLAY - Silt dry, stiff</strong></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td><strong>Reddish brown</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td><strong>CLAY</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td><strong>RED, MOTTLED yellow</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td><strong>Basalt breccia slightly weathered exterior dense centers - hard drilling</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td><strong>INSTALL 11' of conductor casing (16&quot;)</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Signed:** Rodney Couch  
**Date:** 12-11-1997
Date: 12-12 1997

Job No.: 1591R

Hole No.: 1

Elevation: _____ ft.

Customer: ___________ Location: ___________

Driller: Rodney Couch 10 Hrs. Rig ___________

Helper: J. Romano 10 Hrs. Gas ___________

Helper: ___________ Hrs. Repairs ___________


Bit-Size: 14" Type: Star


Depth Start: ______ ft., Depth Stop: ______ ft., Feet Drilled: ______

Water Levels, Time: M ______ ft., Time: M ______ ft.

Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>Drive to Ke'Aana to get more casing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cut + load 4' of 16&quot; pipe</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Basalt boulders</td>
<td>hard drilling</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Saprolite matrix</td>
<td>some difficulty keeping hole straight without stem guide</td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Signed: Rodney Couch  
Date: 12-12 1997
**DRILLING LOG**

**Roscoe Moss Hawaii, Inc.**

**Sent by:** COUNTY OF KAUAI; 1-20-98; 11:08 AM; DEPT. OF WATER

**S-NT BY: COUNTY OF KAUAI; 1-20-98; 11:08 AM; DEPT. OF WATER**

---

**Date:** 1/13/98  
**Job No.:** 15-97R  
**Hole No.:** 1  
**Location:** KAILUA-WAIAKAMOU  

---

**Driller:** Ted Smith  
**Helper:** Earl Ching  
**Helper:**  
**Arv. Job:**  
**Lv. Job:**  
**Hrs.:**  
**Or. No.:**  

---

**Bit-Size:** 14"  
**Type:** Star  
**Casing-Size:**  
**Length in hole:**  
**In., Amt. Perforated:**  
**Depth Start:**  
**Depth Stop:**  
**Feet Drilled:**  

---

**Water Levels, Time:**  
**M ft., Time:**  

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Board of Water Supply (Bill Edy)</strong> Postponed 5th Test Unit Till Thursday at 8:00 AM Due To Conflicting Schedules</td>
<td></td>
</tr>
<tr>
<td>27'</td>
<td>Hard Blue Rock</td>
<td>Went To Kalihiwai Job &amp; Started Drilling, Built Up Bit &amp; Drilled 3' at Hard Blue Rock</td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:**

---

**Signed:** J. A. Smith  
**Date:** 1/13/98
### DRILLING LOG

**Roscoe Moss Hawaii, Inc.**

**Date:** 1/14/97  
**Job No.:** 15-97  
**Hole No.:**  
**Elevation:** ft.  
**Location:** Kaliihiwai, Kauai

<table>
<thead>
<tr>
<th>Date</th>
<th>1/14/1997</th>
<th>Job No.</th>
<th>15-97</th>
<th>Hole No.</th>
<th>Elevation</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>T J Smith</td>
<td></td>
<td>10 Hrs.</td>
<td>Rig</td>
<td>Gas</td>
<td>Oil</td>
</tr>
<tr>
<td>Helper</td>
<td>Earl Ching</td>
<td>10 Hrs.</td>
<td></td>
<td></td>
<td>Hrs.</td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Repairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Or. No.</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>1/14/97</td>
<td>Job No.</td>
<td>15-97</td>
<td>Hole No.</td>
<td>Elevation</td>
<td>ft.</td>
</tr>
<tr>
<td>Customer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>T J Smith</td>
<td></td>
<td>10 Hrs.</td>
<td>Rig</td>
<td>Gas</td>
<td>Oil</td>
</tr>
<tr>
<td>Helper</td>
<td>Earl Ching</td>
<td>10 Hrs.</td>
<td></td>
<td></td>
<td>Hrs.</td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Repairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Or. No.</td>
<td></td>
</tr>
<tr>
<td>Bit-Size</td>
<td>14&quot;</td>
<td>Type</td>
<td>Star</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth Start</td>
<td></td>
<td>ft.,</td>
<td>Depth Stop</td>
<td>ft.,</td>
<td>Feet Drilled</td>
<td></td>
</tr>
<tr>
<td>Water Levels, Time</td>
<td></td>
<td>M</td>
<td>ft., Time</td>
<td>M</td>
<td>ft.</td>
<td></td>
</tr>
<tr>
<td>Measurements</td>
<td></td>
<td>A</td>
<td></td>
<td>B</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Hard Blue Rock</td>
<td>Drilling very hard in Blue Rock. Wished up Bit 9 Times in 2'</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**Signed:** J J Smith  
**Date:** 1/14/1997
DRILLING LOG

Roscoe Moss Hawaii, Inc.

91-259A Olai Street • Kapolei, Hawaii 96707
Telephone (808) 682-5866 • Fax (808) 682-5866

Date: 1/15/98

<table>
<thead>
<tr>
<th>Customer</th>
<th>Location</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>Helper</th>
<th>Job No.</th>
<th>Hole No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>T S Smith</td>
<td>Earl Ching</td>
<td>15-77PE</td>
<td>______________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rig</th>
<th>Gas</th>
<th>Or. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________</td>
<td>___________</td>
<td>___________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M</th>
<th>ft.</th>
<th>Time</th>
<th>M</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>14&quot;</td>
<td>STAR</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>32-34</td>
<td>Hard - Blue Rock</td>
<td>Drilling in Hard Blue Rock weld on bit every 30-45 min. last run broke of 2 corners &amp; flattened axe will pull bit off tomorrow &amp; turn upside down it will on another axe rigener.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________</td>
</tr>
</tbody>
</table>

Signed: JF S ________________
Date: 1/15/98
Drilling Log

Date: 1/16/1997  Job No. 15-97  Hole No. ________  Elevation ________ ft.

Customer: __________________________ Location: __________________________

Driller: J. S. Smith  8 Hrs.  Rig: __________
Helper: Earl Chung  8 Hrs.  Gas: __________  Oil: __________
Helper: __________  Hrs.  Repairs: __________

Bit-Size: _______  Type: STAR


Depth Start: _______ ft., Depth Stop: _______ ft., Feet Drilled: _______


Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Broke of Bit, Turned upside down &amp; welded Bit 6½ lbs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 lbs. of 1105 Rd.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grease &amp; Service Rig, Changed Oil in Pickle 25 620. Miles</td>
</tr>
</tbody>
</table>

Signed: __________________________  Date: 1/16/1997
<table>
<thead>
<tr>
<th>Date</th>
<th>11/11/98</th>
<th>Job No.</th>
<th>15-97L</th>
<th>Hole No.</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Eberhart</td>
<td>Location</td>
<td>Kalihui, Kauai</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>T J Smith</th>
<th>10 Hrs.</th>
<th>Rig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>Earl Ching</td>
<td>10 Hrs.</td>
<td>Gas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oil</td>
</tr>
</tbody>
</table>

|------------|--------------|---------|---------|

<table>
<thead>
<tr>
<th>Bit Size</th>
<th>14&quot;</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Star</td>
<td></td>
</tr>
</tbody>
</table>

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</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>ft., Depth Stop</th>
<th>ft., Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M ft., Time</th>
<th>M ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>34'</td>
<td>Hard Blue Rock</td>
<td>Make up Bit, Sever, Rig</td>
</tr>
<tr>
<td>37'</td>
<td></td>
<td>Drilled '3'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Remarks:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signed</th>
<th>J.D. Smith</th>
<th>Date</th>
<th>11/11/98</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# DRILLING LOG

- **Date**: 1-24-1998
- **Job No.**: 1597-R
- **Location**: Kilauea, Kauai

### Details

- **Driller**: Rodney Couch
- **Helper**: Joffi Romano
- **Rig**: Betsy
- **Helper Hrs.**: 10
- **Repair Hrs.**: 0
- **Arv. Job Hrs.**: 0
- **Lv. Job Hrs.**: 0
- **Or. No.**: 0

### Casing Details

- **Bit-Size**: 14"
- **Casing-Size**: 16" in., Length in hole: 17 ft., Amt. Perforated: 0 ft.

### Depth and Formations

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>hard basalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>dense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>redish brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>clay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>slightly weathered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>basalt</td>
<td>occasional interstitial clay</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Water Levels

<table>
<thead>
<tr>
<th>Time</th>
<th>M</th>
<th>M</th>
</tr>
</thead>
</table>

### Remarks

- Remarks: ___________________________________ 

### Measurements

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
</table>

### Signed

- **Signed**: "Judith" 
- **Date**: 1-21-1998
Date: 1-20-1997  
Job No.: 597-K  
Hole No.: 1  
Elevation: 91.5 ft.

Customer: Ann Erhart  
Location: Kailua, Oahu

Driller: Rodney Couch  
Hrs.: 10  
Rig:  

Helper: John Yamane  
Hrs.: 10  
Gas:  
Oil:

Arv. Job:  
Lv. Job:  
Hrs.:  
Repairs:

Bit-Size: 14  
Type:  

Casing-Size: 16 in.  
Length in hole: 17 ft.  
Amt. Perforated:  
in.

Depth Start:  
Depth Stop:  
Feet Drilled:  

Water Levels, Time:  
M  ft., Time:  
M  ft.

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>grayish black</td>
<td>Change from star bit to hubbard</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>basalt - dense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>soil, well-compact ed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>Alluvium of rock fragments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>slightly weathered basalt &amp; secondary calcite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>black dense basalt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Signed: Rodney Couch  
Date: 1-20-1997
### DRILLING LOG

**Roscoe Moss Hawaii, Inc.**

91-259A OLAI STREET • KAPOLEI, HAWAII 96707

TELEPHONE (808) 682-5856 • 682-5554 • FAX (808) 682-5866

---

**Date:** 1-23-1997  
**Job No.:** 1597-R  
**Hole No.:**  
**Elevation:** 97.5 ft.

**Customer:** __________________  
**Location:** __________________

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
<th>Gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodney Church</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Kamana</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Bit-Size:** 14 in.  
**Type:** Hubbard

**Casing-Size:** 16 in., Length in hole: 17 ft.  
**Depth:** Start 80 ft., Depth Stop 116 ft., Feet Drilled 36 ft.

**Water Levels:** Time M ft., Time M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>black - dense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>basalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>weathered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>basalt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>very weathered</td>
<td>surveyors arrive</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>weathered</td>
<td>ground elevation</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>solid basalt</td>
<td>drop in water level to 75.5</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**Signed:**  
**Date:** 1-23-97  
**Remarks:** ________________________________
*Drilling Log*

**Roscoe Moss Hawaii, Inc.**

91-259A Olai Street • Kapolei, Hawaii 96707  
Telephone (808) 682-5856 • 682-5554 • Fax (808) 682-5866

---

**Date:** 1-22-98  
**Job No.:** 1597-R  
**Hole No.:** 1  
**Elevation:** 97.5 ft.

**Customer:**  
**Location:** Kauai

**Driller:** Rodney Couch  
**Helper:** John Romano  
**Arv. Job:**  
**Lv. Job:**  
**Hrs.:** 10  
**Rig:**  
**Gas:**  
**Oil:**

**Hrs.:** 10  
**Repairs:**

---

**Bit-Size:** 14  
**Type:** Hubbard

**Casing-Size:** 16 in., Length in hole 17 ft.  
**Amt. Perforated:** ft. in.

**Depth Start:** ft., Depth Stop ft., Feet Drilled

**Water Levels, Time:** M ft., Time M ft.

---

**Depth** | **Formation** | **Remarks** | **Top** | **A** | **B**
---|---|---|---|---|---
116 | basalt |  
125 |  
125 | slightly weathered |  
132 | basalt |  
132 | solid basalt |  
140 | some vesicles |  
140 | broken slightly |  
143 | weathered basalt | drop in water level |  
149 |  

**Measurements**

---

**Remarks:**

---

**Signed:** Rodney Couch  
**Date:** 1-22-98

---

---

---
**DRILLING LOG**

**Roscoe Moss Hawaii, Inc.**

91-259A OLAI STREET • KAPOLEI, HAWAII 96707
TELEPHONE (808) 682-5856 • 682-5554 • FAX (808) 682-5866

**Date:** 1-26-1998  
**Job No.:** 1597-R  
**Hole No.:**  
**Elevation:** 97.5 ft.

<table>
<thead>
<tr>
<th>Customer</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hawaii</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>Helper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodney Couch</td>
<td>Jacob Komano</td>
</tr>
<tr>
<td>10 Hrs.</td>
<td>10 Hrs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rig</th>
<th>Gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betsy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>hubbard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>Length in hole</th>
<th>Amt. Perforated</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 in.</td>
<td>12 ft.</td>
<td>ft.  ft. in.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M ft.</th>
<th>Time</th>
<th>M ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>143</td>
<td>Slightly weathered</td>
<td></td>
</tr>
<tr>
<td>161</td>
<td>Basalt</td>
<td></td>
</tr>
<tr>
<td>161</td>
<td>Vesicular basalt</td>
<td>water level drops to 92'10&quot;</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**Signed:** Rodney Couch  
**Date:** 1-26-1998
Mr. Tracy Runnels  
Roscoe Moss Hawaii, Inc.  
91-259A Olai Street  
Kapolei, HI  96707

Dear Mr. Runnels:

Kilauea- Earhart Well No. 1325-02

This is in response to your February 6, 1998 letter, requesting approval to:

- install 167' of 8" casing, 60' louvered and 107' blank; and
- drill and test deeper than the 1/4 theoretical thickness of the lens.

We understand that you will be drilling and testing at 10 ft depth increments and will report your findings to us.

By this letter, your requests are approved provided that the well owner agrees that the well will be used for nonpotable purposes only in perpetuity. Exceeding the 1/4 aquifer thickness limit risks upconing, which may increase chlorides beyond usable limits for both potable and nonpotable needs.

We will look forward to receiving the data. Thank you for your attention to the conditions of the well construction permit and the requirements of the Hawaii Well Construction and Pump Installation Standards (January, 1997).

If you have any questions, please contact Lenore Nakama at 587-0218.

Sincerely,

[Signature]

EDWIN T. SAKODA  
Acting Deputy Director

LN:ss

c: Ann Earhart
February 6, 1998

STATE OF HAWAII (DLNR)
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HI  96809

ATTN: LENORE NAKAMA

REF: KILAUEA - EARHART WELL NO. 1325-02

Dear Lenore,

We have drilled the above subject well to a depth of 167' below ground. Ground elevation is 97.1 MSL (survey attached), water level is 88.1 from this elevation. High level water fell to basal after 116' depth was reached in well.

At 167', a short pump test reveals 80 GPM draws well to 162' and breaks suction in 12 minutes. A field Hach kit test water to be 100 PPM chlorides.

With your approval, we will be installing 167' of 8" casing 60' louvered and 107' blank. Unstable hole at 167' will require the advancing of casing by drilling inside with 8" tools.

As we are close to 1/4 the theoretical lens, we will pump and test water quality at 10 ft depth increments and report our findings with your approval. Your consideration of these matters is greatly appreciated.

Sincerely,

TRACY RUNNELLS, DRILLING ACTIVITIES

TR: gm
Roscoe Moss Hawaii, Inc.
91-259A Olai Street
Kapolei, HI. 96707

Attn: Tracy Runnells

Project: 1572

Subject: Well Head Elevation - Earhart Well Project # 1325-02,
Kalihiwai, Kauai, Hawaii   TMK: 5-2-10:27

Gentlemen;

On January 23, 1998, we performed a survey on the subject project and found the elevation of the well head (16” diameter pipe) to be 98.92 MSL. The ground elevation at the well head was 97.1 MSL.

WAGNER ENGINEERING SERVICES, INC.

February 3, 1998
P.O. Box 851
Hanalei, Hawaii 96714

Ronald J. Wagner
Licensed Professional Land
Surveyor Certificate No. 5074
November 26, 1997

State of Hawaii
Dept of Land & Natural Resources
Commission on Water Resource Mgmt
P.O. Box 621
Honolulu, HI 96809

Attn: Michael D. Wilson

Re: Kilauea-Earhart Well No. 1325-02

Dear Mr. Wilson:

Please accept this letter as official notification of our intent to begin work immediately on the above referenced well project.

A fully endorsed copy of the terms and conditions is enclosed for your records. We appreciate the timely review and issuance of this Well Construction Permit.

Sincerely,

[Signature]

Tracy Runnells
Drilling Activities

TR:tg
Kilauea-Earhart Well, Well No. 1325-02

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management's Administrative Rules, Section 13-168, entitled "Water Use, Wells, and Stream Diversion Works", this document permits the construction and testing of Kilauea-Earhart Well (Well No. 1325-02) at 2970 Kaahumanu Road, Kauai, TMK 5-2-10:28 lot 11-B-3, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 2470, Honolulu, HI 96813, shall be notified, in writing, at least two (2) weeks before any work authorized by this permit commences.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, to accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards. If the permittee fails to conduct a pumping test in accordance with the Standards, a request to extend the permit will be issued by the Chairperson. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department's Historic Preservation Division (587-0045) immediately.

6. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

8. The permittee shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

10. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(d) prior to any well sealing or plugging work.

12. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: November 14, 1997
Expiration Date: November 14, 1999

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee's Signature: Anne G. Earhart
Date: 12/4/97

Printed Name: Anne G. Earhart
Firm or Title: Owner

Driller's Signature: Tracy Kinawll
License #: AC-16437 Date: 11/26/97

Printed Name: Tracy Kinawll
Firm or Title: Roscoe Moore Hawaii, Inc.

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment

C: USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Kauai Department of Water Supply
Sharman Noguchi, Hawaiian Trust Co., Ltd.
Ann Earhart
Mr. Tracy Runnells  
Roscoe Moss Hawaii, Inc.  
91-259A Olai St.  
Kapolei, Hawaii 96707  

Dear Mr. Runnells:

Well Construction Permit  
Kilauea-Earhart Well (Well No. 1325-02)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 12:

**Special Conditions**

1. All water wells shall be cased with new steel casing conforming to one of the manufacturing standards listed in Hawaii Well Construction and Pump Installation Standards (January, 1997) and in the standards of AWWA publication ANSI/AWWA A100-90, as may be amended. The physical properties of the steel shall conform to ASTM A-242, ASTM A83, Type E or S, Grade B, or approved equal. The well casing shall be manufactured in accordance with applicable sections of ASTM A139, as may be amended.

This permit **does not** authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. Please note that special conditions may simply highlight application deviations from the Standards.

The well owner is responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

To validate your permit, please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use. Please provide all the information in this packet to your well drilling contractor.

Also attached for your information is a copy of the Department of Health’s review comments.

If you have any questions, please call the Commission staff at 587-0218.

Aloha,

Michael D. Wilson  
Chairperson

Enclosures
Mr. Tracy Runnells  
Roscoe Moss Hawaii, Inc.  
91-259A Olai St.  
Kapolei, Hawaii 96707

Dear Mr. Runnells:

Well Construction Permit  
Kilauea-Earhart Well (Well No. 1325-02)

Enclosed are two (2) copies of your approved Well Construction Permit for the captioned well(s) which authorizes well construction activities but excludes installation work for your permanent pump. As part of the Chairperson's approval, the following special conditions were added and are part of your permit under Permit Condition 12:

**Special Conditions**

1. All water wells shall be cased with new steel casing conforming to one of the manufacturing standards listed in Hawaii Well Construction and Pump Installation Standards (January, 1997) and in the standards of AWWA publication ANSI/WWA A100-90, as may be amended. The physical properties of the steel shall conform to ASTM A242, ASTM A53, Type E or S, Grade B, or approved equal. The well casing shall be manufactured in accordance with applicable sections of ASTM A139, as may be amended.

This permit does not authorize work for your permanent pump installation. Approval and issuance of your pump installation permit is contingent upon completed application and information provided to and accepted by Commission staff as required in the Well Construction & Pump Installation Standards (1/23/97) and any special conditions performed under this permit. Please note that special conditions may simply highlight application deviations from the Standards.

The well owner is responsible for all conditions of the permit. This includes ensuring that the well construction contractor, or other party who constructs the well(s), submits a completed Part I of the Well Completion Report form (enclosed) within sixty (60) days after the well construction work is completed. Be advised that you may be subject to fines of up to $1000 per day for any violations of your permit conditions.

To validate your permit, please sign and have the contractor sign both permit originals and return one for our files. Also, copies of the aquifer pump test worksheet and the well completion report form are enclosed for your use. Please provide all the information in this packet to your well drilling contractor.

Also attached for your information is a copy of the Department of Health's review comments.

If you have any questions, please call the Commission staff at 587-0218.

Aloha,

MICHAEL D. WILSON  
Chairperson

Enclosures
WELL CONSTRUCTION PERMIO
Kilauea-Earhart Well, Well No. 1325-02

In accordance with Department of Land and Natural Resources, Commission on Water Resource Management’s Administrative Rules, Section 13-168, entitled “Water Use, Wells, and Stream Diversion Works”, this document permits the construction and testing of Kilauea-Earhart Well (Well No. 1325-02) at 2970 Kalihwai Road, Kauai, TMK 5-2-10:28 lot 11-B-3, subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97) which include but are not limited to the following conditions:

1. The Chairperson of the Commission on Water Resource Management (Commission), P.O. Box 621, Honolulu, HI 96809, shall be notified in writing, at least two (2) weeks before any work authorized by this permit commences.

2. The well construction permit shall be for construction and testing of the well only. A minimum one-inch diameter monitor tube shall be permanently installed, in a manner acceptable to the Chairperson, and accurately record water levels. The permittee shall coordinate with the Chairperson and conduct a pumping test in accordance with the Standards (a pump testing worksheet is attached). The permittee shall submit to the Chairperson the test results as a basis for supporting an application to install a permanent pump and withdraw water for use. No permanent pump may be installed until a pump installation permit is approved and issued by the Chairperson.

3. In basal ground water, the depth of the well may not exceed one-fourth (1/4) of the theoretical thickness (41 times initial head) of the basal ground water unless otherwise authorized by the Chairperson.

4. The permittee shall incorporate mitigation measures to prevent construction debris from entering the aquatic environment, to schedule work to avoid periods of high rainfall, and to revegetate any cleared areas as soon as possible.

5. In the event that subsurface cultural remains such as artifacts, burials or concentrations of shells or charcoal are encountered during construction, the permittee shall stop work and contact the Department’s Historic Preservation Division (587-0045) immediately.

6. The proposed well construction shall not adversely affect existing or future legal uses of water in the area, including any surface water or established instream flow standards. This permit or the authorization to construct the well shall not constitute a determination of correlative water rights.

7. The following shall be submitted to the Chairperson within sixty (60) days after completion of work:
   b. Elevation (referenced to mean sea level, msl) survey by a Hawaii-licensed surveyor.
   c. As-built sectional drawing of the well.
   d. Plot plan and map showing the exact location of the well.
   e. Complete pumping test records, including time, pumping rate, drawdown, chloride content, and other data.

8. The permittee shall comply with all applicable laws, rules, and ordinances, and non-compliance may be grounds for revocation of this permit.

9. The well construction permit application is incorporated into this permit by reference and is subject to the Hawaii Well Construction & Pump Installation Standards (1/23/97).

10. The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The work proposed in the well construction permit application shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Chairperson upon a showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Chairperson no later than three (3) months prior to the date the permit expires. If the commencement date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

11. If the well is not to be used it must be properly capped. If the well is to be abandoned then the permittee must apply for a well abandonment permit in accordance with §13-168-12(f) prior to any well sealing or plugging work.

12. Special conditions in the attached cover transmittal letter are incorporated herein by reference.

Date of Approval: November 14, 1997
Expiration Date: November 14, 1999

I have read the conditions and terms of this permit and understand them. I accept and agree to meet these conditions as a prerequisite and underlying condition of my ability to proceed. I also understand that non-compliance with any permit condition may be grounds for revocation and fines of up to $1000 per day.

Permittee’s Signature: ___________________________ Date: ____________

Printed Name: ___________________________ Firm or Title: ___________________________

Driller’s Signature: ___________________________ License #: ___________________________ Date: ____________

Printed Name: ___________________________ Firm or Title: ___________________________

Please sign both copies of this permit, return one to the Chairperson, and retain the other for your records.

Attachment
USGS
Department of Health/ Safe Drinking Water, Wastewater, and Clean Water Branches
Kauai Department of Water Supply
Shamman Noguchi, Hawaiian Trust Co., Ltd.
Ann Earhart
**SECTION 1: WELL LOCATION INFORMATION**

<table>
<thead>
<tr>
<th>Island</th>
<th>KAUAI</th>
<th>Proposed Use</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquifer System</td>
<td>HANALEI</td>
<td>Proposed Withdrawal</td>
<td>70000</td>
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<tr>
<td>Aquifer Sector</td>
<td>KALIHIWAI</td>
<td>System Sustainable Yield</td>
<td>15</td>
</tr>
</tbody>
</table>

**SECTION 2: WELL SECTION DATA**  
(*enter data in grey cells only*)

<table>
<thead>
<tr>
<th>Elevation at top of casing</th>
<th>287 ft., m.s.l.</th>
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<tbody>
<tr>
<td>Ground Elevation</td>
<td>71.75 ft.</td>
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<tr>
<td>Cement Grout</td>
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<tr>
<td>Rock Packing</td>
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<tr>
<td>Hole Diameter</td>
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<tr>
<td>Total Depth</td>
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<tr>
<td>Estimated Head</td>
<td>287 ft.</td>
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<tr>
<td>Calculated Aquifer Thickness</td>
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<tr>
<td>County Water Supply (Y/N ?)</td>
<td>No</td>
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**SECTION 3: CHECKLIST**  
(*values to check are shaded*)

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<tr>
<th>Well Depth</th>
<th>Theoretical Thickness of Aquifer</th>
<th>287 ft.</th>
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<tbody>
<tr>
<td></td>
<td>1/4 Aquifer Thickness</td>
<td>71.75 ft.</td>
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<td>Depth of Well below Sea Level</td>
<td>20 ft. ok</td>
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<table>
<thead>
<tr>
<th>Well Casing</th>
<th>Minimum Wall Thickness</th>
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<tr>
<td>Material</td>
<td>Steel</td>
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<tr>
<td>County or Non-County</td>
<td>non-county</td>
</tr>
<tr>
<td>Minimum Thickness</td>
<td>0.250 in.</td>
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<tr>
<td>Wall Thickness Provided</td>
<td>0.250 in. ok</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum Length of Solid Casing</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% of ground to top of aquifer</td>
</tr>
<tr>
<td>Length of solid casing Provided</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing Material</th>
<th>#11</th>
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</table>

<table>
<thead>
<tr>
<th>Annular Space</th>
<th>If the cell above reads #N/A, reference HWCPIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculated Depth of Grouting</td>
<td>100.1 ft.</td>
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<tr>
<td>Depth of Grouting provided</td>
<td>145 ft. ok</td>
</tr>
<tr>
<td>Thickness of Annular Space</td>
<td>3 in. ok</td>
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</tbody>
</table>

(refer to HWCPIS Section 2.2)

(refer to HWCPIS Section 2.4 c)

(refer to HWCPIS Section 2.4 d)

(refer to HWCPIS Section 2.4 e)

(refer to HWCPIS Section 2.6 c)

(refer to HWCPIS Section 2.6 d)
TO: Honorable Lawrence Miike, Director
   Department of Health
   Attention: Dennis Tulang, Wastewater Branch
   William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson
   Commission on Water Resource Management

SUBJECT: Well Construction Permit Application
   Kilauea-Earhart (Well No. 1325-02)

Transmitted for your review and comment is a copy of the captioned well application.

We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by November 15, 1997.

Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

For the applicant's information, a source of possible wastewater contamination is not located near the proposed well site (information attached).

Other relevant DOH rules/regulations, information, or recommendations are attached.

No comments/objections

Contact Person: Lori N. Kajirana

Phone: 586-4294

Signed: Lori N. Kajirana

Date: 10-27-97
IWS DATA PROFILE --- COUNTY OF KAUAI

TMK #: 5-02-010:028  FILE #: 3109-

OWNER: EARHART ANNE
LOT LOCATION: 2960G  KALIHIWAI RD KILAUEA
REMARK:

********** DATES **********
SUBMIT DATE: 11/21/95  PLAN APPROVAL DATE: 11/30/95
REVIEWED BY: FU  INSPECTION DATE: / /
SYSTEM APP'D DATE: / /

***** TECHNICAL DATA *****
TREATMENT TYPE: SEPTIC TANK  DISPOSAL Via: TRENCH
USE FOR: 5 BEDROOMS  DESIGNED BY: SNYDER
PERCOLATION: 15 min/in  CAPACITY: 1250 gal.

PRESS ANY KEY TO CONTINUE.
TO: Honorable Lawrence Miike, Director  
Department of Health  
Attention: Dennis Tulang, Wastewater Branch  
William Wong, Safe Drinking Water Branch

FROM: Michael D. Wilson, Chairperson  
Commission on Water Resource Management

SUBJECT: Well Construction Permit Application  
Kilauea-Earhart (Well No. 1325-02)

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Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

RESPONSE:

[ ] This well qualifies as a source which will serve as a source of potable water to a public water system (serving 25 or more people at least 60 days per year or has 15 or more service connections) and must receive Director of Health approval prior to its use to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, Rules Relating to Potable Water Systems, §11-20-29.

[ ] This well does not qualify as a source serving a public water system (serves less than 25 people or more people at least 60 days per year or 15 service connections) and if the well water is used for drinking, the private owner should test for bacteriological and chemical presence before initiating such use and routinely monitor the water quality thereafter. However, if future planned use from this source increases to meet the public water system definition then Director of Health approval is required prior to implementation.

[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.

[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.

[ ] For the applicant's information, a source of possible wastewater contamination [ ] is located near the proposed well site (information attached).

[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.

[ ] No comments/objections

Contact Person: Bill Dong  
Phone: 586-4258

Signed: Bill Dong  
Date: 10/24/97
Mr. Tracy Runnels  
Roscoe Moss Hawaii, Inc.  
91-259A Olai St.  
Kapolei, HI  96707

Dear Mr. Runnels:

Well Construction / Pump Installation Permit Application for Well No. 1325-02

We acknowledge receipt, on October 20, 1997, of your completed well construction/pump installation permit application for the Kilauea-Earhart Well (Well No. 1325-02). You can expect your application to be processed within ninety (90) days from this date.

For your information, the process of constructing a well is normally regulated and permitted in two (2) steps. First, a well construction permit is issued for drilling and testing purposes only. Based upon information provided by you through a Well Completion Report Part 1 (Well Construction), a pump installation permit (upon completed application) may then be issued to authorize pump work. If a pump is installed then a Well Completion Report Part 2 (Pump Installation) is required.

If you have any questions about your permit application, please contact Lenore Nakama of the Commission staff at 587-0218.

Sincerely,

[Signature]

RAE M. LOUI  
Deputy Director

LN:ss
TO: Honorable Lawrence Miike, Director  
   Department of Health  
   Attention: Dennis Tulang, Wastewater Branch  
   William Wong, Safe Drinking Water Branch  

FROM: Michael D. Wilson, Chairperson  
   Commission on Water Resource Management  

SUBJECT: Well Construction Permit Application  
         Kilauea-Earhart (Well No. 1325-02)  

Transmitted for your review and comment is a copy of the captioned well application.  
We would appreciate your comments on the captioned application for any conflicts or inconsistencies with the programs, plans, and objectives specific to your department. Please respond by returning this cover memo form by November 15, 1997.  
Please find a map, attached, to locate the proposed well. If you have any questions about this permit application, request additional information, or request additional review time, please contact Lenore Nakama of the Commission staff at 587-0218.

LN:ss  
Attachment(s)

RESPONSE:  
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[ ] If the well is used to supply both potable and non-potable purposes in a single system, the user shall eliminate cross-connections and backflow connections by physically separating potable and non-potable systems by an air gap or an approved backflow preventer, and by clearly labeling all non-potable spigots with warning signs to prevent inadvertent consumption of non-potable water. Backflow prevention devices should be routinely inspected and tested.  
[ ] It does not appear that this well will be used for consumptive purposes and is not subject to Safe Drinking Water Regulations.  
[ ] For the applicant’s information, a source of possible wastewater contamination is not located near the proposed well site (information attached).  
[ ] Other relevant DOH rules/regulations, information, or recommendations are attached.  
[ ] No comments/objections  

Contact Person: _____________________________ Phone: ________________  

Signed: _____________________________ Date: ________________
<table>
<thead>
<tr>
<th>F/YRD</th>
<th>APPD</th>
<th>SRCC/D</th>
<th>COST</th>
<th>PROJECT</th>
<th>PH/ACT</th>
<th>AMOUNT</th>
<th>NAME/DESCRIPTION (WANG INPUT)</th>
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<td></td>
<td>(1) 25.00 (Cash)</td>
<td>Roscoe Moss, Inc.</td>
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<td></td>
<td>TOTAL 25.00 (Cash)</td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS:**

LINE (1) Earhart Well
LINE (2)
LINE (3)
LINE (4)

10/20/97 *0037* CASH 25.00
State of Hawaii
COMMISSION ON WATER RESOURCE MANAGEMENT
Department of Land and Natural Resources

97 OCT 20 A9:41

APPLICATION FOR PERMIT
for Well Construction or Pump Replacement

and send completed application with attachments to the Commission on Water Resource Management. Application must be accompanied by a non-refundable filing fee of $125.00 payable to the Dept. of Land
and Natural Resources. The Commission may not accept incomplete applications. For assistance, call the Regulation Branch at 587-0225.

1. APPLICANT: (circle primary contact (a) Primary Fax (b) Landowner (c) Contractor

(a) WELL OWNER (Ann Earhart)
Firm/Name Ann Earhart Contact Person Same
Address 2970 Kalihiwai Road Honolulu, HI 96813

(b) LANDOWNER (HAWAIIAN TRUST CO. LTD.)
Firm/Name HAWAIIAN TRUST CO. LTD. Contact Person Sharman Noguchi
Address 111 S. King Street Honolulu, HI 96813

(c) CONTRACTOR (Roscoe Moss Hawaii, Inc)
Firm/Name Roscoe Moss Hawaii, Inc Contact Person Tracy Runnels
Address 91-259 A Olai St Kapolei, HI 96707

2. WELL LOCATION/NAME: Kilauea - Earhart Well Island Kauai
Address 2970 Kalihiwai Road Honolulu, HI 96813

(Attach a USGS map, scale 1"=2000", and a property tax map showing well location referenced to establish property boundaries.)

3. (a) PROPOSED WORK: (Drill New Well K) Deep Well (x) Submersible
Deep Well Turbine □ Rotary □ Motor
□ Propeller □ Gas
□ Reciprocating □ Impulse □ Electric, rated horsepower 5 HP
□ Rotary-Gear □ X for Pump Replacement, Existing Pump Capacity: gallons per minute
□ Centrifugal
□ Drilled
□ Radial
□ Replace Pump
□ Install New Pump
□ Modify Existing Well
□ Redrill
□ Abandon/Seal *
* Be sure to complete and submit well abandonment report upon completion of work.

(b) WELL TYPE:
□ Dug □ Bored □ Driven □ Drilled
□ Submersible
□ K) Drilled
□ Radial
□ Is this well a part of a battery of wells? □ Yes □ No
(Briefly describe and fill in the diagram on the back of this form.)

4. PROPOSED PUMP INFORMATION: Rated Pump Capacity: 80 gallons per minute
Pump Type
□ Deep Well Turbine □ Rotary □ Propeller □ Diesel
□ Reciprocating □ Gas
□ Rotary-Gear □ Impulse □ Electric, rated horsepower 5 HP
□ Centrifugal
□ Drilled
□ Radial
□ Replace Pump
□ Install New Pump
□ Modify Existing Well
□ Redrill
□ Abandon/Seal *
□ Be sure to complete and submit well abandonment report upon completion of work.

Multiply pump capacity by 8760 to determine gallons per year.

5. PROPOSED USE: □ Municipal (including hotels, stores, etc.)
□ Domestic (individual, noncommercial water use) □ Industrial
□ Irrigation (crop) □ Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: 70,000 gallons per day
(b) METHOD OF FLOW MEASUREMENT: (x) Flow-meter
□ Open-pipe □ Orifice Plate □ Weir

7. PENDING ACTIONS: □ CDUA □ SMA □ EIS □ EA □ NONE □ Other (explain)
Completion Date

8. REMARKS, EXPLANATIONS: Well is to irrigate 16.7 acres of landscape. Well will be drilled and test pumped before final design of well casing is installed. Completed well will be finished below grade in a vault.

I understand that approval of this application attaches the following conditions: 1) the proposed work is to be completed within two (2) years of approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permit work; 3) monthly water use data shall be submitted to the Commission; 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the pump capacity or future use up to the permitted pump capacity.

Well Owner: Ann Earhart Landowner: Hawaiian Trust Co., Ltd. Contractor: Roscoe Moss Hi, Inc
Signature: 9/13/97 Signature: Date: 9/23-97 Trust Co.
For Official Use Only:
Date Accepted Field Checked By
Date

Agreement: Trust Co.

Aqaurifer System Name: Kauai - Hanalei
Latitude: 13.25-02
Longitude:
8. Remarks, Explanations (cont'd)

9. PROPOSED WELL SECTION

Elevation at top of casing
148 ft, msl.

Cement GROUT 145 ft.

Rock Packing 25 ft.

Hole Diameter 14 in.

Total Depth 170 ft.

Ground Elevation 150 ft, msl* estimate

Solid Casing:
Material Steel
Length 150 ft
Diameter 8 in
Wall thickness .250 in

Casing XØ Perforated Screen
Material Steel
Length 20 ft
Diameter 8 in
Wall thickness .250 in
Openings 14.6 sq. in A.F.

Open Hole:
Length NA
Diameter

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted as start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports.
APPLICATION FOR PERMIT

1. APPLICANT: (circle primary contact) (a) Well Owner (b) Landowner (c) Contractor
   Firm Name: Anna Earhart
   Address: 2970 Kaliihi Road
   Phone: 714 4948717
   Fax: (808) 682-5866

2. WELL LOCATION/NAME: Kilauea - Earhart Well
   Island: Kauai
   Address: 2970 Kaliihi Road
   Tax Map Key: 5-2-10:28 105

3. (a) PROPOSED WORK: (X) Drill New Well
       □ Deeper
       □ Modify Existing Well
       □ Redrill
       □ Modify Pump
       □ Abandon/Seal
       □ Replace Pump

4. PROPOSED PUMP INFORMATION:
   Pump Type:
   □ Deep Well Turbine
   □ Rotary
   □ Propeller
   □ Reciprocating
   □ Centrifugal
   □ Impulse
   □ Submersible
   □ Rotary-Displacement
   □ Impulse
   □ Impulse

5. PROPOSED USE:
   □ Domestic (including hotels, stores, etc.)
   □ Irrigation (crop)
   □ Industrial
   □ Municipal (including hotels, stores, etc.)
   □ Other (explain)

6. (a) PROPOSED AMOUNT OF WITHDRAWAL: 70,000 gallons per day
   (b) METHOD OF FLOW MEASUREMENT: (X) Flow-meter
       □ Open-Pipe
       □ Orifice Plate
       □ weir

7. PENDING ACTIONS:
   □ CDUA
   □ SMA
   □ ES
   □ EA
   □ NONE
   □ Other (explain)

8. REMARKS, EXPLANATIONS:
   Well is to irrigate 16.7 acres of landscape. Well will be
   drilled and test pumped before final design of well casing is installed. Completed
   well will be finished below grade in a vault.

I understand that approval of this application attaches the following standard conditions: 1) the proposed work is to be completed within two (2) years of approval date; 2) the contractor shall submit to the Commission a well completion/abandonment report within 30 days after the completion date of the permit; 3) monthly water use data shall be submitted to the Commission; and 4) such approval shall not constitute a determination of correlative water rights and shall not guarantee the permit capacity or future use up to the permitted pump capacity.

Well Owner: Anna Earhart
Landowner: Hawaiian Trust Co., Ltd.
Contractor: Roscoe Moss Hi, Inc.

For Official Use Only:
Date Received
Date Accepted
Field Checked By
Date
Longitude
Latitude
Aquifer System Name
State Well No.

1100905 WCPH Fr.
9. PROPOSED WELL SECTION

Elevation at top of casing
148 ft. msl

Ground Elevation 150 ft. msl estimate

Cement Grout 145 ft.

Solid Casing:
Material: Steel
Length: 150 ft.
Diameter: 8 in.
Wall thickness: .250 in.

Rock Packing 25 ft.

Casing: KD Perforated □ Screen
Material: Steel
Length: 20 ft.
Diameter: 8 in.
Wall thickness: .250 in.
Openings 14.6 sq. in./F.

Hole Diameter 14 in.

Total Depth 170 ft.

Open Hole
Length: NA
Diameter: 

*Approximate elevation at time of filing application. Ground elevation above mean sea level (msl) by a surveyor licensed by the State must be submitted at start of construction. Final elevations of well components shall be submitted in the well completion/well abandonment reports. 